Sida Evaluation 02/06

Research Cooperation between Vietnam and Sweden

Kim Forss

Department for Research Cooperation

Research Cooperation between Vietnam and Sweden

Kim Forss

Sida Evaluation 02/06

Department for Research Cooperation

This report is part of *Sida Evaluation*, a series comprising evaluations of Swedish development assistance. Sida's other series concerned with evaluations, *Sida Studies in Evaluation*, concerns methodologically oriented studies commissioned by Sida. Both series are administered by the Department for Evaluation and Internal Audit, an independent department reporting directly to Sida's Board of Directors.

Reports may be *ordered* from:
Infocenter, Sida
S-105 25 Stockholm
Telephone: (+46) (0)8 690 93 80
Telefax: (+46) (0)8 690 92 66
E-mail: info@sida.se,

Reports are also available to *download* at:
http://www.sida.se/evaluation

Author: Kim Forss.

Sida Evaluation 02/06
Commissioned by Sida, Department for Research Cooperation

Registration No.: 2001-3559
Date of Final Report: January 2002
Printed in Stockholm, Sweden 2002
ISBN 91-586-8703-3
ISSN 1401–0402

SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
Address: S-105 25 Stockholm, Sweden. Office: Sveavägen 20, Stockholm
Telephone: +46 (0)8-698 50 00. Telefax: +46 (0)8-20 88 64
Telegram: sida stockholm. Postgiro: 1 56 34–9
E-mail: info@sida.se. Homepage: http://www.sida.se

Table of content

Summary

The bilateral programme of research cooperation between Vietnam and Sweden started in the late 1970s. Since its beginning approximately SEK 200 million have been used to finance cooperation between universities and research institutes. In the initial years, the programme focused on international exchanges, but since the late 1980s, the focus has been on capacity building. Many topics have been included, but health research, agriculture and forestry have been prominent all the time.

The research programme is planned in 3-year agreements between Sida/SAREC and the Ministry of Science, Technology and Environment (MOSTE) in Vietnam. The financial contributions grew by 28% and 25% respective over the last programming periods. The budget for the 3-year period 2000–2002 is SEK 54 million. It has 9 programme areas, plus three general areas of library support, information technology and an open fund.

The present evaluation was initiated to make an assessment of the whole programme. Individual components have been evaluated, but never the entire programme. The evaluation is an input to the formulation of the programme that is to commence in 2003. It has been designed as a participatory evaluation, which implies that all stakeholders are invited to define assessment criteria, plan the collection of empirical data, and analyse these to draw conclusions on the merits of individual programmes, as well as on the whole. The report records that process.

Several programmes have had a significant impact on Vietnamese society. Impact has mainly been economic and environmental. The programme in Forestry Research developed hybrid clones of acacia and eucalyptus, as well as pine species. These are used in the government reforestation programme, and as they are two to three times as effective (grow faster and produce better timber) they bring significant advantages to the forestry sector. The researchers have been recognised nationally and awarded medals for their contributions. Farming Systems Research has developed new knowledge of animal feed and husbandry practices, as well as new types of biogas converters. These are applied widely; 15.000 households are estimated to use the biogas systems (bringing economic gains twice the size of the entire programme). Research on the Marine Environment has found ways of cultivating molluscs, thus presenting an alternative to environmentally harmful shrimp farming. Other programmes have had an impact on government policy formulation and legislation (Health Systems Research and Science and Technology Policies).

Research is documented through publications in various forms. The programmes have together published around 540 contributions to national and international scientific journals, conferences and workshops. The count includes some unpublished papers, but also a few books. The aim of the programme was not only to produce research results, but also to build the institutional capacity to do so. The evaluation analysed institutional development in three categories; human resource development, organisational development (research infrastructure), and systems development (research networks).

By the end of 2001, a total of 31 Ph.D. students had successfully defended their dissertations and 28 Masters students had completed their programmes. Several shorter training courses had been conducted at most of the Vietnamese institutions (two exceptions), and there were study tours abroad for scientists. Several institutes had laboratory equipment and other facilities, and there was a cross-cutting programme of library support. But it takes time to build research capacity. The four programmes that can show outstandingly successful results have been engaged in the programme

for 10 to 15 years. The amount of money is not so significant; the budgets for each research programme ranges from slightly more than SEK 10 million to around SEK 20 million.

The most successful programmes were also distinguished by having developed viable networks of cooperation in Vietnam as well as regionally, and to some extent further away. The national networks are particularly interesting as they point to means of bridging the gap between universities and research institutes, which is a problem in the Vietnamese scientific community.

Many programmes present a variety of managerial solutions. Still, there are some features that characterise the most successful ones. These features can be found more generally too, but perhaps not to the same extent or in the same forceful combination. These good examples, or lessons learned if one so wishes, can be taken as a rudimentary form of checklist for the design of future programmes. These features include:

1. Recognising the mutual interests and ascertaining that the capacity as well as the will to pursue common research interests are present. To this must be added friendship as a factor to create social energy.

2. The personality of the programme coordinators; communication skills, negotiation capacity, network building competence, and the ability to inspire trust and confidence

3. The capacities of SAREC staff to mobilise the right research facilities, engage in substantial discussions and contribute to the cooperation process in a practical, direct and immediate manner.

4. Ownership of the process demonstrated by MOSTE at the overall programme level, and by Vietnamese coordinators at the level of concrete research programmes.

5. Transparent and fair decision making procedures, which is particularly important when a network of cooperating institutions is built.

6. Monitoring, financial control, timely submission of audited reports.

7. Quality control through a continuos pursuit to refine methods and in all instances strive for reliability and validity.

8. Plan to phase out the bilateral programme, prepare exit strategies, transfer to new sources of finance, and reduce reliance on the bilateral programme.

The programme expanded rapidly during the late 1990s. It is larger and more diversified, and hence more difficult to manage. A more focused programme approach could lend better support to the participating institutions, and could also focus the work of Sida/SAREC and MOSTE. It is suggested that a new programme design builds on two or three research areas, with some 3 to 5 participating institutes/universities in each.

1 Introduction

1.1 Background

Research cooperation between Vietnam and Sweden goes back more than 20 years, when support through SAREC was initiated. During these 20 years the programme content has developed. During the first decade international exchange was considered very important. Vietnamese researchers had, at that time, limited exposure to scientific progress in other countries than those of the "Soviet block" and China. During the wars of the mid 20th century, many other research links were forgotten or disappeared. The resulting isolation from the main currents in contemporary science was a major obstacle. Without an up-to-date knowledge of international research, the scientific institutes could hardly play the role expected of them in the transition of Vietnamese society.

In the beginning of the 1990s, Vietnamese research institutions had made significant progress in creating links to research in other countries. Libraries were better stocked, international journals could be found at many institutes and universities, and international contacts were more common. Many problems remain, but there is no doubt that the international exposure of Vietnamese research is something quite different today, from what it was in 1979. During the 1990s, the Swedish Vietnamese programme of cooperation changed towards capacity building in specific sector programmes; primarily in agriculture, forestry, and health systems research.

The bilateral programme is coordinated by the Ministry of Science, Technology and Environment (MOSTE) on the Vietnamese side, and by SAREC on the Swedish side. SAREC was an independent agency under the Swedish Ministry for Foreign Affairs up to 1995, when it merged with three other agencies of development cooperation to form the new Swedish International Development Cooperation Agency (Sida). The organisational changes in Sweden have had limited impact on programme content and processes of cooperation.

Between 1979 and 2002, the total programme has encompassed around 200 million SEK, the larger amount of which was disbursed in the late 1990s and thereafter. The funds have been used for research infrastructure (laboratories, libraries, information technology), human resource development, and technology transfer. Parts of the funds are channelled to the Swedish research institutes according to the services they provide, but the major part is channelled to the Vietnamese institutions through MOSTE.

The present agreement, which is a three-year agreement from 2000 to 2003, emphasises research in the medical and agricultural sectors with training components at MSc and PhD levels. Apart from these fields, several other scientific sectors are represented. The programme also contains general support to upgrade information technology and to provide library support (the programme content is described in annex 2).

The Swedish-Vietnamese programme of research cooperation must be seen within the context of Vietnam's policies on research and development. The past decade has seen important policy changes. The strong element of detailed central planning has been abandoned. Scientific institutes have received increasing autonomy, and are allowed to engage in more commercial and contract-based relationships. The Central Committee of the Communist Party in 1996 gave MOSTE the task of formulating a strategy for national Science and Technology Development, as an input to the

long-term development plan to 2020. A general framework for the strategy was completed in December 1998, consisting of 25 different sector strategies for science and technology development.

The long-term plan envisages that Vietnam should become an industrialised, modern country through the development of science and technology. Measures to accomplish this task include: (1) change in the institutional framework, (2) reform of science and technology management, (3) change in the funding mechanisms, (4) focus on human resource development, and (5) international cooperation. Further work on the strategy is to elaborate on the various ingredients. Committees for institutional and administrative reform are set up (Roman, 1999). Vietnamese research institutions have changed considerably over the past few decades, but it is likely that the future will hold as much change for the sector. There are several issues relating to the cooperation between universities and research institutes, and to the control of research priorities, and cross-sectoral co-ordination of priorities that will be discussed, reformed, evaluated and reformed anew.

The Vietnamese policy context is important, but it is also significant to recognise the policies of Sida/SAREC. Two objectives are specified for research cooperation; "(1) to assist developing countries strengthen research capacity in the form of creating conducive research environments, providing research education, and to assist with methods to plan, set priorities and allocate funds for research, and (2) to assist developing countries by providing financial and scientific resources to produce new knowledge on topics that are of importance to the developing countries, and to transfer such research results to be used in the development process" (Sida/SAREC Riktlinjer för forskningssamarbete, p 5).

Furthermore, research cooperation is part of the wider development cooperation between Sweden and Vietnam. The program has changed over time, and the sector focus has shifted according to Vietnamese and Swedish priorities. A new framework of cooperation was agreed in November 2001, which provides a continued and high level of funding for development cooperation, but which also focuses the program in terms of purpose and sectors.

1.2 Purpose

As the present three-year programme is coming to an end in January 2003, it is time to take stock of the experiences and to review the results that have been realised so far. This has now been done through a participatory evaluation process, with the addition of an external assessment component. The evaluation process took take place between September 2001 and January 2002. The timing will allow the partners sufficient time to use the evaluation findings in discussions and negotiations for future cooperation.

The purpose of evaluation process was to:

1. Document the results of the research programmes that were funded
2. Analyse the impact of research findings
3. Document training activities
4. Analyse the impact of training
5. Document the capacity building activities of the programme
6. Analyse impact of capacity building, in particular its institutional development effects
7. Describe and analyse the organisation of research cooperation
8. Relate the SAREC programme to broader issues of research policy, research co-ordination and higher education.

The terms of reference of the evaluation are found in annex 1. The evaluation is in particular expected to cover issues relating to (a) focus and co-ordination of the programme, (b) network building and regional cooperation, and (c) co-ordination of the SAREC programme with other Sida activities in Vietnam. In order to maximise the utility of the evaluation process, SAREC has chosen a combination of participatory methods supplemented by an external assessment of a formative nature.

Table 1.1. Components of the Swedish – Vietnamese programme of research cooperation

Programme	Coordinating partners	Year when programme started*	Budget allocations Sida/SAREC (SEK million)
Forestry Research	Research Centre for Forest Tree Improvement Forest Research Institute of Sweden	1987	8.5
Farming Systems Research	University of Agriculture and Forestry National Institute of Animal Husbandry Can Tho University Hue Agricultural University Swedish University of Agricultural Sciences	1989	20.7
Plant Diseases Control	Agricultural Genetics Institute Swedish University of Agricultural Sciences	2000	2.0
Marine Environment	Institute of Oceanography, Nha Trang Institute of Oceanology, Hai Phong	1993	11.4
Rare Earth Materials	Institute of Material Sciences Uppsala University Royal Institute of Technology	1989	13.3
Health Systems Research	Health Policy and Strategy Institute Karolinska Institute (Department of International Health and Social Medicine)	1991	19.2
Hanoi Medical School	Hanoi Medical School Karolinska Institute	2000	6.0
Social Sciences	National Centre for Social Sciences and Humanities Stockholm University Centre for Pacific and Asian Studies.	2000	5.0
Science and Technology Policies	The National Institute for Science and Technology Policy and Strategy Studies Stockholm School of Economics.	1997	4.7
Open Fund			6.0
Library Support		1984	-
Information Technology			

***** starting date is here understood as the time when Sida/SAREC allocations were made available (see the source below), which is not necessarily the same as when implementation of research activities started.
Sources: Sida Insatspm 1996.12.19; Sida; Vietnam – Sweden Research Cooperation Programme 2000–2002 (no date).

1.3 Methods

Evaluation methods can be described at three levels in connection to this evaluation. First, there is the overall approach of participatory evaluation, which sets the stage for the utilisation of findings in the development of a new programme. The methods of participatory evaluation are described in "Who are the Question –Makers?", published by UNDP. In summary, participatory evaluation means that the stakeholders involved in the programme participate in the evaluation process. The stakeholders in this context means, for example, MOSTE in Vietnam, Sida, as well as the research institutes in Vietnam and Sweden that implement the programme. These stakeholders are all central to the process. More peripheral stakeholders could in theory also be included, as for example representatives from other ministries in Vietnam, research institutes that are not funded under the programme, organisations that may - or may not - benefit from the application of the research results.

For practical reasons, this evaluation process builds primarily on the participation of MOSTE, Sida/SAREC, and the programme coordinators from the Vietnamese research institutes and universities. The Swedish researchers have been consulted for their view of the programme and they have had an opportunity to comment on a draft version of the final report. But they were not involved in setting evaluation criteria, nor were they as extensively interviewed as the Vietnamese institutions, and they did not take part in drawing conclusions for the future about the programme.

Participation means that the stakeholders have an influence on – determine – all significant steps in the evaluation. The evaluation has a specific purpose as mentioned above and as seen in the terms of reference. However, it was a rather open process that was initiated. One of the first steps was to formulate the criteria of what constitutes a successful programme. In a conventional evaluation this is normally done by the organisation commissioning the evaluation. Here it was done together with MOSTE and the Vietnamese research institutes in a workshop in Hanoi. These assessment criteria are echoed in this report, which is organised in chapters that reflect the criteria. The workshop minutes can be retrieved in annex 3.

Following the agreement on evaluation criteria, and a joint discussion of methods, data on the programme were collected and compiled by me (the undersigned external consultant) and a report was produced in draft form. The report was then discussed in a meeting in Hanoi (January 29 and 30), with the same representatives as in the first workshop. The minutes of the meeting are annexed to the final report – and in case there were divergent views these would have been recorded (there were not). Not only does the evaluation invite participation, but it also makes sure that all participants are heard, and provides a transparent process of analysis and deduction of recommendations for the future.

The second level of describing the evaluation process concerns the methods of gathering data. The empirical data collection that led to the documentation and analysis of results was undertaken by a mixture of interviews, observation and document review. The basis for the assessment of the different programmes consists of the annual reports from each coordinator to MOSTE and Sida/SAREC. This is supplemented by research documents in the form of articles, conference papers, dissertations, and other published – or unpublished – research results. Research has also been assessed through looking at work-plans, research instruments such as questionnaires and literature reviews. Each of the programmes in Vietnam was visited, and there were also contacts with the Swedish programme coordinators – either in the form of telephone interviews, or in meetings. An open but structured interview guideline was used during the interviews. A number of sites were visited in Vietnam to study the application of research findings.

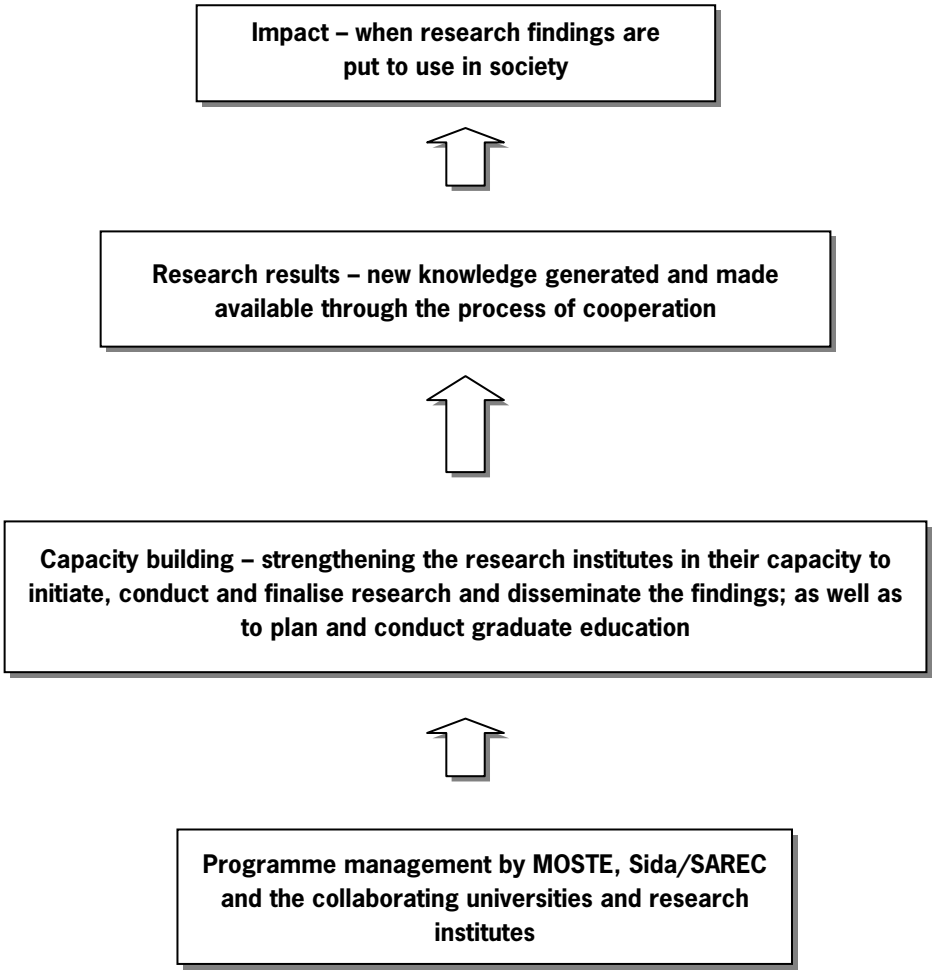
The programme covers many scientific disciplines, such as oceanography, farming systems, forestry, health systems, science policy, macroeconomics, sociology and microeconomics, plant genetics and rare earth metals. There are probably few that command the research subjects in all these fields, and I definitely do not. My background is as an economist, specialising on evaluation research. There is thus a limit to how much I can penetrate into the quality and capacity of organisations dealing in many of these topics. Hence it is even more significant that this is a participatory evaluation. My own role has been to suggest questions, contribute to a structure of the evaluation, to sum up the reports and collect data through interviews, and to produce the report. But much of the evaluative content actually comes from the programme coordinators (Vietnamese and Swedish) and their frank assessment of the process of cooperation.

There is of course a risk that an evaluation process, which builds as much on internal assessment as this one, would not be considered objective enough. The problem of objectivity is handled in three ways. First, the process of data collection and assessment is transparent. It should be possible for a critical reader to assess whether the data should be interpreted as done in the report, and it is thus possible for the reader to conclude that a programme was not successful, where it may have been pronounced quite satisfactory. Second, even if individual programme coordinators wish to paint a rosy picture of their component, it is likely that other coordinators ask critical questions during the meetings, or that MOSTE and Sida/SAREC compare this with other information from the years of cooperation. Third, I also have a particular role to play as an external observer, where I encourage a frank, critical and sincere exchange of information.

The third level of methods consists of a model through which different concepts relate to each other. Impact is a word which is frequently used in development cooperation, but which can relate to different practical phenomenon. When this report discusses impact of research cooperation, it refers to how research findings are used in society. Research has had an impact when it becomes practically useful. The cooperation programme aims, among other things, at building research capacity. If it has been successful, we could also say that new research (or teaching/lecturing) capacities are forms of impact.

However, in the report, I use the word impact only in relation to the use of research findings in society. Capacity building is properly seen as an objective. If capacities were developed, this may result in more research and better graduate education, and if the research is relevant, disseminated and accepted, it will have an impact. The figure below illustrates how these concepts relate to each other.

The model is important also as it provides a structure to the process of inquiry. This report is organised so that it starts at the top, and then works its way downward in the hierarchy of concepts. We start by looking at the fundamental effects, and then look for causes. However, even if it is expected that capacity building has a causal connection to the production of research results, which again is causally connected to impact in society, this causal connection is anything but mechanistic. Whether the effect is caused or not depends on a number of other factors as well, and some of these are treated in the text.



This evaluation is expected to be formative, that is, it should guide the design of the next programme of bilateral research cooperation, which starts in 2003. Some of the issues for that programme concerns the choice of sector, in particular whether a new programme should have a focus on biotechnology. Whether this is a proper choice or not cannot be answered through an evaluation of past events, particularly not as there was no such programme in the past. This is a choice that must be informed by the policy of the Vietnamese and Swedish authorities jointly. The evaluation can suggest design features that make a programme successful; it can suggest how to implement a programme in biotechnology. It can also suggest that if certain basic conditions that made past programmes succeed are not met, then it is perhaps not a good idea. It can also suggest design features that are to be avoided, that lead to less than optimal performance in the past, and may do so again. The last chapter in the report is intended to distil such lessons from the past. These are relevant for a biotechnology programme, but also for a programme in any other scientific field.

The evaluation focuses on the programme of research cooperation that is implemented in the period 1999–2002. The programmes are listed in table 1.1, together with the amounts allocated, and the starting year. Some projects have a long history, others are quite new. They cannot be expected to show similar results, or even to be compared in similar terms. The remaining chapters of this report use tables to list the achievements of the programmes. The reader is asked to bear in mind that there are vast differences in amounts allocated and time used to produce these results.

Programmes that may appear to lag behind, often do so because they started very recently. I have chosen to present the total achievements of the programmes since their start. It would neither be feasible or particularly interesting to discuss only the last three years of a programme that has lasted for 10 years or more. The reader should also bear in mind that several projects have been started and have come to an end during the 1980s and 1990s, so while the report presents the results of some projects that were existing already 1988 or 1989, there were many others at the time that are not presented here. This is not a comprehensive review of SAREC programmes in Vietnam, it has a focus on the last three years, and an aim to produce conclusions that can be of use in the next programme period.

2 Impact of research cooperation

2.1 Focus on applied research

In the theory of science, the quest for new knowledge is often described as an end in its own. Scientific inquiry may not have any other purpose than to generate new knowledge, and whether that knowledge is practically applicable or can be instrumentally used for other purposes, is of no consequence (Ackoff and Emery, 1972). Vietnam has an old scholarly tradition. Scientific and philosophical inquiry was a noble and worthwhile pursuit, which needed no other justification. Ancient Vietnam was, in this sense, no different from Greece, Rome, China or Japan (Nakamura, 1986).

It is debatable whether scientific inquiry must necessarily be practically useful. The issue is often confused in respect of the time span assumed. Even those who argue that scientific inquiry must be under no restrictions usually argue that this freedom will, in the final end, be most useful to society. Hence it is not the instrumental use of science that is debated, but rather the means through which the instrumental use of science will be reached.

The more urgent the social need for scientific inputs to development, the more justified will focused policies in respect of science and technology be. A higher relative freedom of publicly funded scientific inquiry is presumably a luxury that only the most affluent societies are willing to afford. There is no doubt that scientific endeavours in Vietnam are expected to feed into the national development efforts, and the sooner the better.

Sida policies for research cooperation also emphasise the practical utility of research. The policy document that was quoted in chapter 1 says "*research results that are of importance to development*". This cannot be understood as anything else than research that can be put to use. The research coordinators on the Sida/SAREC programme were also unanimous in putting "impact" at the top end of the list of criteria for this evaluation (see annex 3).

The programme has a very strong focus on applied research, at least in the cases where the objectives are expressed in terms of research results. Some programme objectives are mainly expressed in the form of capacity development, and hence the object of inquiry is not specified in the project documents. However, even in the latter programmes, the actual content of the work has an altogether applied character. During the visits to the Vietnamese institutes, I found no examples of basic research, but many illustrations of applied research.

Table 2.1 summarises the knowledge content of the different programmes (this, as subsequent tables, discuss the 9 scientific sectors that are subject of cooperation). In reality, the whole bilateral programme consists of 12 components. The remaining three are in (1) library support, (2) upgrading information technology in the research community, and (3) open funds, for example for new projects, evaluation, and so on. These three areas are not evaluated on the same terms as the other. The IT programme has not started yet, the library support does not build on research cooperation as such (though it has a natural part in the programme).

Table 2.1. Basic or applied research. A summary of the substantive knowledge development in the programme of research cooperation.

Programme	Subject
Forestry Research	Forest tree improvements, breeding and propagation of tree species
Farming Systems Research	Sustainable tropical livestock systems
Plant Diseases Control	Pathology research in crop improvement
Marine Environment	Coastal zone systems and their management; environmental monitoring and prediction
Rare Earth Materials	Technology for preparation of rare earth alloys
Health Systems Research	Priority health problems in the Vietnamese health care system
Hanoi Medical School	Application of biotechnology and biomedicine in diagnosis, control and treatment of diseases
Social Sciences	Effects of trade liberalisation
Science and Technology Policies	Technological capabilities to enhance competitiveness and sustainable development.

Source: Sida/SAREC, Vietnam – Sweden Research Cooperation Programme 2000–2002.

The fact that the programme has had a sharp focus on applied research, meaning to have an impact in society, does not necessarily mean that the impact was created. The results may not have materialised, or if they materialised, they many not have had the expected impact. It is also conceivable that other research priorities were set once the practical implementation started. This will be discussed in the following sections. So far, we have established that the programme consists of applied research tasks, and in that, it is line with the intentions of Vietnamese science and technology policies, as well as with Sida's policies for research cooperation.

2.2 From research results to impact.

There is obviously a time lag between the publication of research findings and some form of practical impact. Programmes that started one or two years ago cannot be expected to document impact 2001. But is it reasonable to expect an impact from research cooperation that started 8 to 10 years ago? Not necessarily, evidence from developing countries' science villages and the like suggest that it takes long to produce results, but even longer to the application of results on a scale where an impact may be felt. The process often involves new actors; issues of patent rights, agreement on distribution of profits, pricing of benefits, etc. are difficult and take time to resolve.

Nevertheless, if the objectives specify that the cooperation is expected to create an impact, then it is of course justified to assess whether the impact has been created. In one sense, it is remarkable that the project documents do set impact as an objective, but they do not specify whether it is expected to take 5, 10 or 15 years to create that impact.

The programme does have some remarkable examples of impact though. The programme on forest tree improvement was motivated by the alarming decrease in forest coverage, due among other things to the war, uncontrolled exploitation and erosion. The government's reforestation programme establishes a target of 5 million hectares of forest plantations. But to reach the target

there was a need for faster growing tree species. Some of the research results from the cooperation programme were natural hybrid clones between two acacia species (A. mangium and A. auriculiformis). The hybrid clones have become very popular as they are fast growing and produce good stem forms – suitable for wood-processing industries. Their productivity in volume of growth is reported to be 2–3 times higher than that of parental species. The clones have also proved themselves in trials in Australia and Malaysia. This was one of the first outputs of the programme, but in recent years, artificial hybrid combinations of eucalyptus species have also been created. The pilot plantations proved to be very productive and the species are promising for planting on the flat land and low hill areas of central Vietnam. The social forestry components of the project shows that the improved planting materials help raise farm incomes significantly.

One of the interesting subjects within the programme on Farming Systems Research was the development of biogas systems. The technology itself is well known, but farmers have been slow to use the idea. Installation costs have been quite high, and the application has been low because of difficulties in using the gas. The young researchers on the programme developed new tanks in plastic that were very easy and cheap to produce, and they also developed the pipes and stoves further.

The total investment cost for a small biogas plant, using the manure of a handful of pigs (or the equivalent in goats, cows or other animals) to produce cooking gas for the daily needs of an average family is USD 60 to 70. The process produces better manure for the gardens, and it also substitutes the cost of fuelwood for cooking (or saves the time that would be spent harvesting wood). Interviews at three different farms indicate that the amount saved just through substituting firewood would be enough to pay back the investment in one year – and that leaves other positive effects unaccounted.

Since the equipment was introduced, a total of around 15.000 farm households have installed the system. A simple cost benefit analysis would thus suggest that if each family saves USD 60 per year, after the cost of installation is paid back, for a period of 4 years (discounting the total investment over five years), the total benefit would amount to USD 3.6 million. This one benefit, from this one component of a programme with many other practical results, is enough to justify the entire programme (the total cost of which is less than USD 2 million).

It is worth mentioning that this impact has been created without any focused effort to promote the use of biogas. Knowledge spread through word-of-mouth, and those who had the inclination installed the systems. On the one hand, it is possible to say that the result of having the invention spread to 15.000 households is not much. In a population of 60 million, most of whom live on the countryside and would be potential customers of biogas systems, one would expect more. On the other hand, it is perhaps not to be expected that the innovation would be disseminated if it is not actively promoted. This is, after all, results from a university, and the distance between universities and farmers is considerable. In the absence of active promotion, the dissemination of ideas take time, and the impact generated by the farming systems research is commendable.

Other inventions that have been spread through the project are for example cultivation of duck-weed in fish-ponds, to be used as chicken-, duck- and geese feed, raising scavenger chicken, cultivation of sugarcane and legume trees as sources of animal feed (for ducks, hens, goats, pigs, cattle and buffalo). The extent of dissemination varies, but the practical nature of the research is very clear, and there are many examples of farmers who apply one or many of the ideas. Farming systems research has the benefit of an established structure of agricultural extension services. Even though no concerted efforts were made to promote the new technologies, ideas trickle down

through refresher courses for extension service personnel, and new graduates who enter the service also have knowledge of the research at the agricultural universities.

Other parts of the programme also had results that could have a practical impact, but the path from research results to application was – for institutional reasons – much longer. At the Institute of Material Sciences, the research cooperation centred on rare earth metals and subsequently on rare earth materials, that is, on adding small amounts of the rare earth metals into alloys for improved performance. Among the practical results is, for example, the development of magnets by using rare earth oxides (one of the applications of the magnet consists of experiments to make a motorbike powered by these magnets). Another application is a clinical waste incinerator. The rare earth based catalyst is used to convert toxic gases into non-toxic ones in the catalytic converter.

The Oceanographic Institute in Nha Trang, as part of the cooperation, monitors the changes in mangrove forests. The increased demand for shrimp, has lead many villages to construct ponds for shrimp farming. In the process, the mangrove forests are destroyed, which causes severe ecological problems. Part of the solution lies in finding alternative sources of income. The Institute has experimented with mollusc cultivation. The cultivation has been quite successful. In one village, four families took part in the experiment in 2001, and the economic gains for them were considerable. Another 115 families were said to start mollusc cultivation in 2002. This alone is a considerable impact in a short period of time, and if the dissemination continues, and there are no setbacks in terms of falling prices, or other problems, it will become a major success in the future.

Much as these inventions are interesting, they have not yet had any impact such as demonstrated by the programmes in forestry and farming systems. There is no full-scale production of the incinerator yet, nor of the magnets. They exist as prototypes developed by the Institute. The links from the Institute to commercial production and use in society is of a different nature than in the previous programmes. The applied research results are there, but the impact remains to be seen.

Finally, it should be noted that the evaluation only discusses programmes that were in operation during the present period of cooperation (2000–2002). Older programmes, that have been phased out, are well known for the considerable impact they have created. Perhaps the development of new cholera vaccines is the most prominent example of research with a high impact (see for example SAMBAND, 2001).

2.3 Categories of impact

The nature of impact varies with the type of research. It would neither be realistic nor fair to compare a programme that has been in operation for almost 15 years, and that has benefited from Ph.D. training, masters programmes and institutional support throughout that time, to another which may only be one or two years old, and where the extent of cooperation has been much lower. It is quite clear that programmes that have longer duration and receive more funds also have a higher impact.

The four programmes mentioned above either have realised, or could come to realise, tangible impact in terms of economic benefits, better environment, social welfare, or poverty alleviation. In some of the other programmes, we may never come to see that tangible benefits. The impact could still be high. As an example the programme in Health Systems Research has produced reports on maternal and child health, family planning, pharmaceuticals, and disease specific areas such as tuberculosis and malaria. The knowledge generated through the field laboratory approach has led to new information on the prevalence of disease, patterns of usage of health services, and related

issues. It has pointed at problems of inequity in health services, particularly as the poorest households and minority populations suffer more from ill health and are less likely to be reached by the health services. The research has led to policy development, where the new national health policies are said to show a higher concern for these issues than previous policies did (according to interviews with programme coordinators).

Other programmes also had an impact on policies. The programme on science and technology was aimed at studying the implications of policy reform in science and technology. The programme was said to have influenced the long-term development plans of Vietnam, in particular the Vision 2020, which delineates how Vietnam will be transformed to a modern industrialised nation with the help of science and technology. The programme is also said (interviews at NISTPASS) to have influenced new legislation on foreign investment.

In their spheres, these two programmes have had an impact on policies, which in turn may have a considerable practical impact. However, it is far beyond this evaluation to establish whether the practical and tangible impact actually has been realised. That would require a policy evaluation, which is an entirely different and more complex subject. In the meantime, the concept of policy impact, that is, the research findings have had an impact on the formulation of policy, is all we can provide.

As the table shows, 5 of the 9 projects have had a verifiable impact. The impact of the oceanographic research is yet at an early stage, and in respect of two programmes the impact has been in terms of policy change. Whether the policy has actually had an impact cannot be established in this report. The two programmes that have created a substantial impact have been funded for longer periods and at higher levels than the other programmes. It is not to be expected that the new programmes in plants genetics, etc. generate an impact already. It is not specified in the objectives, and it would under any circumstances be premature.

The dominating categories of impact are economic and environmental. The above mentioned examples illustrate how research has promoted higher incomes among farmers, fishermen in coastal villages, and for those engaged in forestry. If and when the programmes in rare earth materials and plants genetics are used in society, they will also generate an economic impact. The forestry programme has an environmental as well as an economic impact. The same would be case with the research in coastal zone management. The programme of cooperation has a heavy bias towards the natural sciences, so it is not surprising that the benefits are primarily found in these categories.

2.4 Increasing impact

It takes long for research findings to penetrate to daily life and practice. The question is if the process can be speeded up? The answer is of course "yes". Part of the answer has to do with the organisation of science in Vietnam, and how the research institutes are linked to universities as well as to industry. These problems are beyond the scope of this evaluation. But the issue can also be discussed with reference to bilateral development cooperation. The evaluation could not document any links between the Sida/SAREC programmes and the other parts of bilateral development cooperation. It would be tempting to suggest that the programmes should be better coordinated, and in particular that other projects and programmes are designed to continue where the research programmes come to a halt.

The arguments in favour of such an approach are practical. As there is a bottleneck from research to practice, it makes sense to remove that bottleneck. This can be done with money and

organisation. For example, bilateral programmes could assist with capacity development of the extension services in agriculture, specifically supporting the dissemination of research from the institutions cooperating in Farming Systems Research.

In theory, it would also be possible to use funds from bilateral development cooperation for pilot production of prototypes developed at the Institute of Material Sciences. In fact, each particular research programme could be supplemented by institutional and capacity building support to the institutions or firms that are expected to use research results. If the Vietnamese authorities and Sida wish to focus the bilateral programme in these areas, there is nothing to prevent them from doing so.

However, the question is if it would be a good idea. Targeted aid money to use specific research results, and not others, may create the wrong incentives at research institutes, as well as in society. "Better" research, which was not part of the SAREC programme, may risk being forgotten because those researchers did not connect to a bilateral programme of follow-up. At present, it can be assumed that the system treats all research results in the same way. It is, supposedly, equitable. No institutes have a better competitive position in this sense than others do. And other actors in society pick the ideas they want, develop them commercially or otherwise, according to an unbiased view of what will work. It may be quite dangerous to change part of the system, to strengthen the impact of a specific segment of research.

However, personnel on the bilateral aid programmes (Swedish as well Vietnamese) must of course keep themselves up to date with research going on at Vietnamese universities and institutes. They should show an interest in using the findings of research, and should also communicate their ideas about problems that research can help resolve. But this dialogue should not require any specific support. It should be a natural part of daily duties - and should apply whether the research has been funded by SAREC or not.

3 Research findings

3.1 Mutual interest in research

The term "research cooperation" carries an image of mutual interest in advancing science by moving the frontier of human knowledge outward. The choice of this particular term invokes a picture of scientists together defining research objectives; problems to solve, questions to answer, knowledge to generate; and it suggests that the researchers jointly agree on the process, how to gather empirical data, what mixture of inductive or deductive strategies to apply, and how to present results. Furthermore, if no other information was given, one would expect the cooperating partners to contribute more or less equally in all phases of the work.

The programme that was funded by Sida/SAREC is exceptional in that it builds on development assistance grants. Hence, the general characteristic of research cooperation may have to be modified. In particular, the research funded here is, according to Sida's policies (Sida/SAREC, 1998), meant to produce knowledge of significance for Vietnam's development. Except in some happy coincidences, that objective would not necessarily have a high priority at Swedish research institutes. So, the question is if the research that is being evaluated here really represents cooperation in the traditional, common sense, understanding of that word. And if it does not, what does the process then represent?

The marine science component was initiated by MOSTE in 1991/92. Feasibility studies were carried out, and two Vietnamese institutes were brought forward as partners in the programme (the Institute of Oceanology in Haiphong and the Institute of Oceanography in Nha Trang). SAREC's assessment (1997) was that the institutes had low capacities and that a programme of capacity building had to be implemented in a steady, slow tempo. It was expected that Swedish university faculties would play a significant role, and an administrator had been appointed for the programme. However, due to personnel turnover, that person disappeared and nobody else in Swedish oceanographic research could be mobilised for the programme.

The two Vietnamese institutes were thus let down by the Swedish researchers. SAREC and MOSTE sought to establish a regional technology transfer from the Philippines. Unfortunately, the marine research in the Philippines could not deliver the expected services in human resources and organisational development. The marine environment programme has a budget of 4.5 million in the present programme, and as shown in table 2.2 there were concrete research objectives. The programme creates an impact, though still of a rudimentary nature. But it is not an example of research cooperation. The Vietnamese institutions work on their own, no Swedish partners were involved in the research, nor was it possible to generate any regional research inputs. It is an unfortunate situation, which is duly recognised by SAREC and MOSTE.

If the programme on the marine environment illustrates an extreme example of lacking cooperation, there are examples from the other programmes where the Swedish research interests are of a marginal character. The programme in Social Sciences was expected to build on collaboration between the National Centre for Social Sciences and Humanities (NCSSH) and the Stockholm University. The Stockholm School of Economics was also thought of as a possible partner in the programme, as well as the universities of Lund, Uppsala and Gothenburg. However, to date the research shows a limited involvement from the Swedish institutions. According to interviews at NCSSH, there were joint seminars, where Swedish researchers contributed to the

development of the topics. However, it has not been possible to document any further cooperation, as there are no examples of papers produced or the like. The evaluation has not found any scientific exchanges following the initial contacts.

When cooperation fails to materialise, this could be explained by real differences in research interests. Social sciences may have particular difficulties in defining joint research themes. The scientific paradigm defines issues that may be of interest, indeed, it defines whether a particular problem formulation or research question has any relevance at all. The formulation of research questions on the Social Sciences programme could be an example of where research priorities are quite different, and where Swedish universities may have difficulties finding staff who pursue similar questions – or even, staff that may have a role to play in supervising younger researchers.

Health Systems Research, Forestry Research and Farming Systems Research are examples of cooperation programmes where the Swedish partners appear to have had a real interest in the particular problems and issues. Under the cooperation in Health Systems Research, there were not only a number of Vietnamese Ph.D. dissertations published, but also several Swedish dissertations. The Swedish researchers benefited from the data gathered in the project, and had use of joint seminars and workshops with their Vietnamese colleagues. The process of developing hybrid varieties of acacia and eucalyptus was of interest to the Swedish partners. The knowledge generated in the programme on Rare Earth Materials, where the university in Uppsala and the technical university in Stockholm were partners, also illustrate a process of joint pursuit of results.

The Farming Systems Research and the Health Systems Research differ from the other programmes in that the Swedish partners focus on international issues in their specific fields. IHCAR is not any Swedish institution working in health systems research. It was set up to focus on international health; it has always been a partner in Swedish development cooperation and has worked with and for WHO and other international organisations. The section of the Swedish Agricultural University that is engaged in the programme focuses on development research, that is, on the problems of agricultural development in the Third World. Hence, it can be expected that the Swedish (and other) researchers at these organisations are more likely to develop common research interests with the Vietnamese researchers. This is also illustrated by the number of joint articles produced in the different programmes.

3.2 Publication of research results

It is common practice in the academic world to assess performance by looking at publications. Research is meant to be shared, and results are shared through publications in books, scientific journals and at conferences. Publications ensure quality control. A commercial publishing house, such as Sage, Macmillan, Routledge, and others, would not accept a manuscript without critical examination of the content. The publisher would also have to be convinced that a sufficient audience could be gathered for a book; unless the authors can arrange funds to pay for part of the cost of publication.

Similarly, publications in international scientific papers have to pass through a process of peer review. Usually three independent and anonymous experts in the field are asked to comment on the quality, interest and utility of the manuscript. Whether we are speaking of books or articles, this is a process that takes time. A manuscript submitted to an international journal, may not be published until a year or two later. The review process is strict, and it often results in that manuscripts – if

accepted at all – have to be modified, supplemented, and reworked. It is not uncommon for two years to pass between the time a manuscript is submitted and the journal printed the paper.

Table 3.1 presents the outputs from the research programmes. There were no books published by international publishing houses, but two books were printed at the Vietnamese organisations. The book attributed to forestry research was published in 1997 by Agriculture Publishing House, and is entitled "Conservation of Forest Plant Genetic Resources (116p). This programme, as well as some of the others (Science and Technology Policy, Health Systems Research, and Farming Systems Research) also had doctoral dissertations printed. Unless the dissertations were published by an independent publishing house, they have not been counted as books here. The book published on the Science and Technology Policy programme was a publication on Research methodology. It is not quite clear how it relates to the programme of cooperation, but it is noted as part of the achievements.

A total of 309 papers were accepted in scientific journals; 131 of them in international journals and 178 in Vietnamese research publications. Many of the articles presented in scientific journals present research that was required for Ph.D. or Master's degrees. There is a rather rigid hierarchy of scientific journals in all disciplines, where it is well known that it is far more difficult to get published in some journals than in others. In the process of evaluation, it has not been possible to distinguish between journals. However, it can be noted that most the articles in Health Systems Research and Farming Systems Research were published in well-known journals such as Lancet, or by international publishing houses such as Elsevier. That indicates that the quality of research must be high.

It is not implied that the quality of Vietnamese journals is generally lower. But in the case of the international, English-speaking publishers, the processes of quality control and peer review are well known and advertised. In other cases this is not so, and hence one cannot be sure what kind of quality control is applied. Also, it is common to count the merit worth of publishing in the international journals as something distinctly different from publishing in national journals, and journals that are associated to one's own research institute. The figure on unpublished papers is more uncertain. It builds on information submitted by the programme coordinators, or on assessment of the status of research during visits to the institutes. In no case does it include publications that are planned – whether for next year or next time. It is, in all cases noted here, verified outputs in the form of written documents that could be presented at conferences or submitted for publication.

All counted, there is thus a total of 393 (including 82 working papers) written contributions to the scientific frontiers under the programme. The contributions are not evenly spread over the scientific sectors, but to some extent, this indicates that some programmes have been part of the bilateral cooperation longer than others have. There is a significant time lag between the production of research results, submission of manuscript, and subsequent publication. A programme that started in 1999 or 2000 could hardly be expected to have produced results that could be published internationally yet.

Table 3.1 Publication of research

Programme	Books	Articles in International Scientific Journals	Articles in national Scientific Journals	Unpublished papers, work in progress *
Forestry Research	1	2	15	-
Farming Systems Research	-	80	20	-
Plant Diseases Control	-	1	3	2
Marine Environment	-	-	5	13
Rare Earth Materials	-	18	60	-
Health Systems Research	-	30	75	35
Hanoi Medical School	-	-	-	6
Social Sciences	-	-	-	6
Science and Technology Policies	1	-	-	-
Total	2	131	178	82

* This figure could be underestimated as several researchers do not record papers that are not published in regular journals. This would include in-house seminars, posters at conferences, and the like.
Sources: Progress reports from programmes, interviews, presentations by coordinators.

Should these 393 publications be considered much, or would it be relevant to expect more? As a whole programme, it must be considered quite good. It is difficult to find data that one could compare with, but two recent Sida/SAREC evaluations can be used for benchmarking. The Sida evaluation of support to the Eduardo Mondlane University in Mozambique counted 33 refereed papers during 2 years of cooperation (Sida Evaluation 98/38). An evaluation of support to the University of Asmara counted an average of 10 unspecified publications a year between 1992 and 2000 (Sida evaluation 01/12). The comparison suffers as we do not quite know how the publications in these other programmes were refereed, and in fairness one should also consider the budgets of the cooperation. Even if it is not conclusive, it suggests that the outputs on the programme are significant. It should also be noted that four of the programmes account for 90% of the publications. These programmes appear to be outstanding in any international comparison. The others have yet to prove their merit.

3.3 Presentation of findings/work in progress

Scientific results can be presented in other ways than in publications. One aspect, which is not covered at all here, could be registration of patent rights. This could be one of the most significant achievements in, for example, biotechnological research. None of the partners in the present programme claim to have registered patents resulting from the cooperation.

Apart from publications, research findings can be presented at scientific conferences. Some conference organisers subject potential presentations to peer review before they are accepted. However, the criteria for acceptance are generally not as strict, and besides, many conferences are organised for scientists to share work in progress. It is not at all as difficult to have a paper accepted at a conference, as it is to have it published in an internationally recognised journal.

Table 3.2 lists the contributions to national and international scientific conferences, workshops and seminars. The total figure of 62 presentations must be treated with caution. Some of the institutes

have records and present staff activities in annual reports. Other institutes have not presented any such statistics. It is not possible to add these presentation to those discussed in the section 3.2. It is standard practice to first present research findings at conferences, and then proceed to publishing in papers or books. It is probably the same research that is presented here, as is listed in table 3.1. However, it is surprising that the number of conference presentations is not higher than the number of publications. In most academic institutions, a research process may be presented at several conferences, and then finally, as the crowning achievement, it would be published in a scientific journal. The conference presentations would serve as quality control, and provide suggestions on how to develop the topic. It may be expected that there would be a ratio of 4 to 1, in conference presentations to publications.

Table 3.2 Conferences, workshops and seminars

Programme	Presentation of papers at conferences (national and international	Number of conferences, workshops and seminars organised as part of the programme
Forestry Research	28	-**
Farming Systems Research	91	4
Plant Diseases Control	6	2
Marine Environment	1	1
Rare Earth Materials	(203)*	(8)*
Health Systems Research	5	2
Hanoi Medical School	4	2
Social Sciences	-	5***
Science and Technology Policies	13	-
Total	66	7

* The Institute of Material Sciences as a whole took part in this number of conferences and organised meetings in 1998 and 1999, but the Institute is much larger than the cooperation financed by SAREC, and many other research projects were presented. The figure cannot be accredited to the SAREC programme.
** The Institute arranged several training courses, and during the decade 91 researchers attended workshops and seminars at the Institute.
***according to information at the evaluation workshop in January 2002. During site visits in December 2001, no seminars had yet been organised, according to interview information.
Sources: Progress reports from programmes, interviews, presentations by coordinators.

The fact that the figure is almost reversed here, possibly indicates that the Vietnamese researchers have difficulties financing presentations at international conferences. Or perhaps the written presentations are considered more useful. It is anyway a puzzle why there was not more conference presentations, given the quality and quantity of research documented in table 3.1. The cooperation programme with Hanoi Medical University is an exception, but illustrates the point. The research students have not published any papers yet, but all have written abstracts, or have presented their findings as work in progress on seminars in Sweden, in Hanoi, or even in other places. One of the researchers attended a conference in India, and was invited to make a presentation on the spot, although she had only gone with the intention of listening to others. On that programme, the researchers have attended 4 conferences (national and international), and at least 6 papers of work

in progress are available. But as the programme only started in 2000, it is not surprising that there are no published reports yet.

Participation in conferences, workshops and seminars is one thing. It is also interesting to note whether the institutes take the initiative to organise meetings. It reflects a strong position if an institute can take the initiative to organise scientific conferences. The institute who takes that role must command the field, be internationally recognised, and administratively effective. If international scholars choose to attend, this reflects that the organising institute is respected. Table 3.2 also lists the conferences organised by the Vietnamese institutes in the programme. The data is uncertain. The reports of one institute (Forestry) notes that 91 researchers and foresters attended conferences organised at the institute, but it is not clear how many conferences this represents, or whether it was the same topic at all of them.

The Institute of Material Sciences presented a report of scientific activities over the past few years. This lists participation with papers in 203 scientific conferences, and 8 conferences organised at the Institute in Hanoi. However, it is not possible to see how much of this can be credited to the SAREC funded programme. Much of it appears to be in other scientific fields than the Rare Earth Materials.

The main achievement in organising conferences is represented by the programme in Farming Systems Research. In 1993, 1996 and 2000 the cooperating partners organised seminars/workshops on Sustainable Livestock Production on Local Feed Resources. Each conference lasted 5 days, and was documented in publications of around 120 pages each. These publications contain full-length papers as well as some abstracts. They are significant contributions in their field. In the regional programme, which is a follow-up on the bilateral programme, a similar conference was organised in Thailand in 2001, and yet another regional workshop followed in Hanoi in December 2001. The column in the table is actually a bit simplistic as it hides big differences between these international seminars and, for example, in-house seminars that were said to have been organised under the Social Sciences programme.

In respect of these outputs as well, most of the results come from some few programs. In some cases the roles are reversed. The programme in Science and Technology Policies had few publications, but several presentations at international and national conferences. Health Systems Research and Rare Earth Materials appear to have had relative might more publications, but not so many presentations at conferences. Taken together, the programme as a whole has significant amount of presentation of research findings. In general, it seems as if presentations at conferences are less favoured by the researchers. It is not clear whether the reasons for this are financial or of some other practical nature. Conferences are useful venues to test ideas and to get feedback on work in progress. It is a useful venue to introduce papers that can later be reworked for publications. It is also a useful way to build develop networks of research contacts. In the balance of how resources are used within the programme, it may be worthwhile to consider of more resources should be spent on attending international conferences, and perhaps less on national publications or some of the other expenditure items.

4 Capacity building for research

4.1 Institutional capacity development

Institutional development has come to occupy a prominent position in development economics. It can be argued that it is the hard core of analysis of what constitutes development and how development comes about. The field is evolving rapidly, and there is a growing body of literature on aspects of institutional development, as well as tried and tested research methods. Institutional development refers to activities at various levels of society. But there are not always clear cut borders between neither levels nor activities – and the broader concepts encircle the more narrow. It is useful to distinguish:

(1) *Human resource development* (training and education) which are concerned with how people are educated and trained, how knowledge and skills are transferred to individuals, competence built up and people prepared for their current or future careers.

(2) *Organisational development* which seeks to change and strengthen management systems in specific organisations in order to improve performance. There are variations between theories and strategies, but they have in "pure" form the following characteristics: (a) focus on individual formal organisations and particularly their internal functioning, (b) less attention paid to external contextual influences on performance, (c) concern with internal organisational changes, and (d) activities include education, training, advice, design of structures and processes. This category also includes organisational infrastructure, for example, in research organisations access to laboratory equipment, libraries, and information technology.

(3) *Systems development* is a broader concept than organisational development. In addition to a concern with human resources and the development of particular organisations, it includes an emphasis on linkages between organisations and the context or environment within which organisations operate and interact. In respect of the Swedish – Vietnamese research cooperation, it is particularly important to distinguish *networks and linkages* among organisations, which include the network and contact between organisations that facilitate or constrain the achievements of particular tasks.

This description of institutional development underlines the interaction between micro (internal) and macro (external) factors determining how organisations translate their capacities into actual performance. Generally speaking, institutional development thus refers to change processes that improve the capacity of a social system to achieve its goals and objectives. When the evaluation describes institutional capacities, it will use these categories to distinguish the different forms of capacity building. Table 4.1 presents a broad overview of how the programmes were affected by these forms of capacity development.

Of the different elements in institutional capacity building, it is quite clear that the programme has a strong focus on human resource development. Organisational infrastructure has received less attention, and it is only a few programmes that had any explicit strategy to develop research networks.

Table 4.1 Capacity development on the research cooperation programmes

Programme	Human resource development	Organisational development	Networks and other aspects of systems development
Forestry Research	Ph.D. , Masters as well as in-house seminars and courses	Chemicals and equipment	Regional contacts
Farming Systems Research	Ph.D. , Masters as well as in-house seminars and courses	Literature Laboratory equipment	Regional and national networks
Plant Diseases Control	Ph.D. , Masters as well as in-house seminars and courses	Minor equipment and consumables	-
Marine Environment	Ph.D. and Masters training	Laboratory equipment	Contacts with Thai marine research
Rare Earth Materials	Ph.D.	Laboratories and equipment	Contacts with regional institutes
Health Systems Research	Ph.D. , Masters as well as in-house seminars and courses	Field laboratory	International network programme, national networks
Hanoi Medical School	Ph.D. programme	Chemicals and equipment	-
Social Sciences	-	-	-
Science and Technology Policies	Ph.D. and Masters training	-	-

Sources: Progress reports from programmes, interviews, presentations by coordinators.

The table only provides an overview. There is a vast distance in the quantity of capacity building between the programmes, even if the words may sound the same from one cell to another. In the next sections, the different elements of capacity building will be further analysed. At this point it is pertinent to remember that SAREC supports institutional development through its general programmes in Library Support, as well as in the programme on Information Technology. The former has been a prominent part of the programme for many years, and the latter is becoming operational in 2002.

4.2 Human resource development

Developing the skills of individual researchers, or indeed of research teams, takes place through a number of different training programmes. The programme has seen Ph.D. training, education to obtain Master's degrees (and the Swedish "licentiat"), as well as Bachelor degrees. Training has occurred through specific courses taught at the universities and institutes by Swedish and Vietnamese lecturers. Table 4.2 presents an overview of the quantity and types of training. The table shows the training results obtained to date. Several more students are expected to obtain their degrees in the near future, particularly on the programmes of Farming Systems Research and Health Systems Research. Further off in the future, a group of PhD. Students at the Hanoi Medical

School are expected to defend their dissertations in Sweden, and in the Marine Environment, 2 Master's students are expected to complete their degrees in Thailand.

Table 4.2 Human resource development on the research cooperation programmes

Programme	Completed Ph.D. degrees	Completed Master's degrees and "licentiat"	Other staff development
Forestry Research	5	5	Overseas study tour 34 people 10 junior researchers for training Training courses 91 researchers
Farming Systems Research	8	21	Seminars and workshops Course son Ph.D. and Masters programme around 100 Study tours for 20
Plant Diseases Control	-	-	Shorter courses conducted by Swedish guest lecturers
Marine Environment	-	-	Short training courses on coastal zone management
Rare Earth Materials	2	-	-
Health Systems Research	2 + 2*	14	Courses and seminars by Swedish guest lecturers and thesis supervisors
Hanoi Medical School	-	-	2 seminars
Social Sciences	-	-	-
Science and Technology Policies	2	1	-
Total	31	28	

- Two Swedish Ph.D. students based their dissertations on empirical studies in connection to FILABAVI..

Sources: Progress reports from programmes, interviews, presentations by coordinators.

Two programmes have had larger training components than others have; the Health Systems Research and Farming Systems Research. Cooperation in Forestry Research has seen a large number of Ph.D. students, but comparatively fewer at the Masters level. That programme also had a large amount of other training; various shorter courses, study tours, etc. On the other programmes, the number of students who have obtained a degree is relatively low.

The training model applied on most programmes consists of a "sandwich approach". It starts with a session lasting from a few months up to a year, where the Vietnamese students follow courses at the Swedish cooperating institution (or possibly some other university outside Vietnam). The students start their Ph.D. or Master's education, complete the basic courses in mathematics, theory of science, etc. They develop a research proposal, and establish contacts with supervisors abroad. Then the students return to Vietnam and resume work/studies at the Institute they came from. They gather data for thesis work, and prepare drafts. When the supervisory group recognise that the work is close to completion, the students return to Sweden, where they finalise the research and defend their thesis.

There are varieties to this general outline. Some students may have to stay longer in Sweden to improve their language skills. Some have pursued their higher studies in Denmark or in Thailand. SAREC has funded British researchers to be supervisors, etc. The model has been quite successful. The Ph.D. students in Farming Systems Research all completed their degrees within 4 years, and an additional group of 4 Ph.D. are expected to be ready in early 2004. That means most students completed their degrees within 4 years. That is extraordinary by all standards. It is rare to find such a large group of students all finalising their studies on time.

The other programmes may have to learn from the success of Farming Systems Research. It took longer for the Ph.D. students from other programmes to finalise their dissertation. Around 8 years in Rare Earth Materials, but closer to 4 in the other cases. The Masters students mainly got their degrees on time. This may not seem so remarkable, but it is fair to take account of the specific circumstances the Vietnamese students work under.

Even if TOEFL tests are required, several have quite poor language skills when they first go abroad, and they have to spend a large amount of time on language training. This naturally also makes it so much harder to follow the content of training, to read and produce working papers. In addition, the "sandwich" method takes the students back to Vietnam, where they also have other duties. The Ph.D. students at the Hanoi Medical University also teach, most of them around 200 hours a year according to interviews. To complete a Ph.D. in four years is a full time job, teaching that much adds at least half-time employment.

It is not made explicit whether it is also an objective to train university teachers. During the visits in Vietnam, nobody ever suggested that pedagogical training was either desired or promoted. However, most Ph.D students teach on undergraduate as well as graduate courses. It could be relevant to include components in pedagogics as part of the exchange, for example for the students from Hanoi Medical School – if and when the Vietnamese partners express an interest in the subject.

Training for higher degrees is often criticised as being overly expensive. The "sandwich" model makes it less expensive, but the real advantage lies in that the research topics are defined according to Vietnamese priorities. Data collection, analysis and synthesis are done in Vietnam. Critiques of higher education in development cooperation also point to the risk of "brain drain". According to the interviews and site visits conducted in this evaluation, not a single one of the 59 persons who have completed their degrees so far have left Vietnam. They all returned, and are now working at the Institutes that took part in the cooperation. This must be added to list of remarkable achievements. In most other countries, it would be expected that around 50% would have left for other jobs abroad or with other employers.

The gender balance in human resource development has been rather equitable, although this differs between programmes. Health Systems Research and Farming Systems Research had close to total gender equity, and the young researchers of the Hanoi Medical School were 50% men and 50% women. These programmes make up the bulk of human resource development. Forestry is by tradition male dominated, and so is the training component here. The same applies to Rare Earth Materials (all men) and Marine Environment (all men). It is remarkable that gender equity is not an issue in the Social Sciences or in the NISTPASS programme. Those taking part were mainly men, either as research partners or as research students.

It is fortunate for the overall picture of the programme that the three above mentioned programmes have coordinators that show concern for gender equity, and who have made sure that they have a pool of talented men and women to choose from.

4.3 Infrastructure development

Infrastructure development or organisational development could take many forms. The evaluation has not seen any examples of organisational or administrative support. This has not been an objective, and hence no activities were planned or executed. It could nevertheless be a relevant subject of cooperation, and it is a natural and integral part of the concept "institutional development". Instead, the collaboration has been concentrated on the scientific content. In several cases has laboratory equipment been important. To quote the progress report from Forestry Research (Le, 2001):

> *"In addition to research and education activities, this project has also supported the RCFTI to strengthen its material basis and facilities needed for research such as: transport means, laboratory equipment, chemicals, tools, communication and office equipment, means for field investigation. It should be mentioned that initial inputs for upgrading research and massproduction of improved germplasm. This has encouraged relevant authorities in Vietnam to provide RCFTI necessary funds for setting up bio-technology laboratory equipment with modern facilities and some other cutting propagation system to enhance RCFTI's capacity in research and genetically improved planting materials."*

The Field Laboratory in Bavi is a complex undertaking in Health Systems Research. It is not actually a laboratory, but it treats the district of Bavi as a laboratory for data collection and analysis of diseases and the effects of the health system among the population. It is a unique development in evidence based health planning. The investments are more in methods and human resources than in physical infrastructure, but it is important as an example of laboratory development.

Other programmes that had equipment components of some significance were the Rare Earth Materials, Farming Systems Research, and Marine Environment. In the former two, the laboratory equipment were installed and integrated with other equipment. They appeared to be well used, and were attended by researchers working on them. The evaluation has described how the cooperation in marine environment never really started, due to the turmoil among the Swedish university organisations. Although SAREC equipment was in place at the Oceanographic Institute in Nha Trang, it did not appear to be in much use. This may be due to the renovation of the buildings, but could also reflect the poor institutional support offered through the programme.

Outside of the specific programmes, SAREC has provided support to the National Centre for Scientific and Technological Information and Documentation (NACESTID). The support has been used to subscribe to 44 titles in scientific journals, provision of a multimedia reading room, and to an open library. Patron service quality has increased with the help of safety equipment such as, magnetic gate, scanners, photocopiers, barcode readers, cameras, televisions and video-players. The services are assessed by reviewing the frequency of journal circulation, questionnaires among clients, and interviews with scientists. The development of the NACESTID included a human resource development component; short-term training course abroad. Training in Vietnam by international experts (digitalisation of information resources) and study tours abroad for librarians.

A total review of the programme of cooperation should include the large component on information technology. The partner in this programme is MOSTE's Informatic Centre. The aim is to provide internet conductivity to all those institutions where Sida/SAREC supports long-term research cooperation, and to build the technical and management capacity in information technology. These activities were mentioned in the programme for the entire period 2000–2002, and could presumably have started already in 2000. Due to issues of mandates and responsibilities within the organisational system, the project agreement was not signed until November 2001, and hence there are no activities to evaluate at present. However, it is a major part of the three-year programme, the delay and the lack of progress in implementation reflects poorly on the overall performance of capacity building activities.

4.4 Network development

More than ever, it is obvious that organisations cannot thrive on their own. They need to connect in networks, where they supplement their own resources with those of others. Network development is therefore an important aspect of institutional development. The internal evaluation of NACESTID (2001) can be quoted on this issue:

> *"Not only NACESTID's staff get benefits from the project but also staff from other information and library organisations … though the project implementation, NACESTID has opportunity to strengthen cooperation with domestic and foreign counterparts (Establishing and enhancing cooperation relationship with Shanghai Library and Korea Institute of Science and Technology Information .. providing information for other SAREC projects."*

The programme on Farming Systems Research has developed a well-functioning network of universities and research institutes all over the country, from the Agricultural University in Can Tho, to the Ho Chi Min City and Hue Universities of Agriculture, and to the National Institute of Animal Husbandry. The network structure has many advantages. Not only is it an end in itself to establish patterns of cooperation. The Vietnamese system of research and higher education suffers from the split between research institutes and universities, which cuts through the entire system. This programme helps bridge that gap in one specific sector.

A larger pool of organisations enables programme managers to apply stricter criteria for selection of students for post-graduate work, and hence provides incentives for competition. The experience of network management in Vietnam enables the researchers to play a leading role on other regional and international networks. Cooperation through networks becomes a good habit and makes the participants more attractive as partners in new ventures. On the other hand, those who focus on building their own institutes rather than contributing to the growth and development of others suffer in the long run.

5 Issues of programme management

This evaluation focuses on results of the research cooperation, according to the criteria for assessment developed during the workshop in Hanoi of September 2001 (see annex 3). The programme is primarily assessed on the capacity building achievements, the research results produced, and the impact that this research has had on society. However, it is also interesting to consider some of the managerial features of the programme. As the overall programme has been quite successful, and some of the components have come remarkable far in capacity development and research, there are many lessons to learn – or issues to discuss. This chapter brings out some of the features of the individual programmes (section 5.1–5.4) and then discusses some issues that concern the whole bilateral programme (section 5.5 to 5.8).

5.1 Identifying research fields and matching institutions

Past programmes have contained other projects than the present. Sida's list of projects contained in the SAREC portfolio between 1986 and 1996 contains 22 titles, 4 of which are also found in the present three-year programme. Among the projects that have been discontinued are: Bacteriology, Traditional Drugs, Malaria Research, Rice Research, Problem Soils, Geotechnology, Metrology, Building Climatology, Modern History and Macroeconomics.

The question is, how does one identify topics to be included in the bilateral programme? MOSTE has the leading initiative, and suggests to Sida/SAREC areas it wishes to include in the programme. SAREC responds. Up to that point, there are no major risks, and the criteria for assessment would be clear to both organisations. However, the next step is critical. If any real cooperation is to emerge, the partners in Sweden and Vietnam have to meet, and have to develop mutual interests in research, as well as confidence and trust in each other.

The programmes that were less prominent in the above review, were all examples of where the expected connections between the Swedish universities and the Vietnamese institutions failed to emerge. It is not possible to quite know why, as this would require in-depth interviews with people who are no longer around at the institutes. Maybe it was due to lacking research capacity and interests. It could also reflect that the Swedish universities had more lucrative or intellectually rewarding opportunities elsewhere.

The successful programmes are characterised by good mutual contacts. The coordinators on both sides had common research interests, and an ability to meet each other professionally. They could jointly develop the research topics, and assist each other on supervisory committees, etc. The cooperation programmes started on a small scale, and were allowed to grow slowly and steadily. Farming Systems Research had annual budgets of around 800 000 SEK during the first couple of years, increasing to 900 000 SEK by 1996, and more from there. Rare Earth Materials started around 600 000 SEK, and did not increase until four years later. Health Systems Research started at 350 000 SEK, and did not reach 900 000 SEK per year until 4 years later.

It takes a couple of years of mutual exchanges, pilot production of research papers, possibly joint contribution to international conferences or the like, before the programme matures, and it would be safe to embark on a larger and more long-term programme. During the initial phase, it is important that SAREC and MOSTE critically follow the exchanges, carefully assess the quality of

cooperation, and are prepared to phase out the subject if the expected mutual commitment fails to materialise.

5.2 Setting targets and monitoring

It is surprising to note that the more complex programmes are also the ones with the best-formulated targets, with clear objectives, time frames, and indicators of performance. In the environments where these managerial instruments would seem easier to apply, the planning formats appear less stringent.

Long-term objectives as well as outputs are sometimes formulated in terms of activities; for example, "*to strengthen research capacity*", or "*to promote rational decision making about..*" Such sweeping formulations make it hard to follow up and verify whether targets are reached or not. Instead, objectives should be formulated in terms of verifiable end states, for example by telling exactly what kind of capacities will be developed, or what new knowledge will be generated.

The programme with Hanoi Medical School provides a good example. The purpose of cooperation is set to "..apply techniques of immunology. Molecular biology and genetics for the study of pathogenic agents, pathology, substance metabolism and clinical pharmacology in acute and chronic infection, non-infectious diseases in Vietnam. "This is a clear indication of what is to be done, and make it easy to check progress and evaluate what happened when the programme comes to an end.

Some programmes do not appear to have any clear research objectives, or clearly formulated targets for institutional development. During interviews concerning the programme in Social Sciences, a number of research activities were mentioned, but it was not possible to document any overall purpose, any time plan, nor any follow-up of whether the papers and other outputs were produced on time. Comparative evaluations in the past indicate that programmes that turn out successful are usually well formulated, planned and monitored from the very beginning. If these administrative routines are not followed when a programme is small, they are not likely to be followed when the project grows (World Bank, 1998).

5.3 Selecting research tasks and candidates

It is not uncommon in evaluations to find that people who benefit from training, study tours abroad etc. are close to retirement age. This indicates that the opportunities for professional development are more regarded as a reward for past services, than as an investment in the future. It reflects managerial power as well. It is very fortunate that the human resource development on this programme has benefited young researchers, people who are at the beginning of their careers, and who will serve science for many years to come.

The selection of candidates for Ph.D. and Master's programmes is a difficult issue, and it lies beyond the scope of this evaluation, as it is a general managerial issue of the Vietnamese research institutions, whether it is funded by Sida/SAREC or not. Most of the candidates for training are selected by the Vietnamese coordinators, and the evidence of results presented in chapters 3 and 4 indicate that the choices were good.

The more complex a programme gets, the more necessary is it that the coordinator pays attention to the selection process. If the provision of training opportunities could be seen as benefiting only –

or mostly – one in a cooperative network, then the other partners will rapidly loose enthusiasm and commitment. The following are some of the examples of good practice from Farming Systems Research, and a few other programmes:

- advertise the opportunities for training and research funding among the cooperating organisations
- make sure that the rules for application, the selection process, and the assessment criteria are made public
- appoint a selection panel consisting of representatives from the different organisations in the network, and possibly also with international partners
- make the results public and have a procedure to deal with complaints

Fair and open procedures make it more likely that there will be a surplus of applicants, and hence give the programme managers an opportunity to select the best.

5.4 Building networks among organisations in Vietnam

There is an enormous diversity of formal and informal research networks in the world today. There can be no doubt that research cooperation, networking and communication are crucial elements in the advancement of professionalism. (Söderbaum, 2001). Networks are not only everywhere, they are also in fashion. They are popular in development cooperation, because they seem to be able to yield benefits that more confined approaches to capacity building do not bring. Many donor evaluations emphasise the point that, in general, research networks "have, on par, been successful … are relevant and have achieved their objectives (Carlsson and Wohlgemut, 1996). In spite of considerable costs, involved in regional cooperation, these costs can often be justified and there are important benefits from networking stemming from the pooling of resources and talents, the spread of risks, intellectual freedom and pluralism (Tostensen et al, 1998).

The first step to the development of regional networks is to start with national networks. With its more than 800 research institutes plus universities and other institutions of scientific capabilities, there is a high potential for networks on the domestic scene. Obviously, there are many such networks, more or less formalised.

Networks may emerge, but they do not flourish randomly. It is important to manage the networks, but far too often, network management is left to chance. This happens because the network structure often falls outside the authority of any one of the participating organisations. Still, it is vital to pay close attention to issues of planning, decision-making, allocation of resources, reporting, and accountability for results.

Farming Systems Research illustrates well how many of these issues have been formalised and made explicit. This inspires trust and commitment from all partners, and enables the network to grow. A network is not an hierarchical organisation, and hence it cannot be managed as one. The processes of management must be transparent and participatory.

5.5 Cooperation or capacity building

Even if the production of research results has been quite impressive on some of the programmes, this mostly reflects the productivity and commitment of the Vietnamese scientists. It is only a few handfuls of the 541 reports, publications, conference papers that are co-authored by Swedish and Vietnamese researchers. The ideal process of research cooperation that was outlined in chapter 2, is relatively rare. The Swedish institutions have participated in capacity development, and they have done so successfully.

If a Swedish researcher speaks of his or her cooperation with a French, Italian or British research organisation, they would have a specific image of what that word "research cooperation" entails. In Vietnam, much of what is called cooperation has, for example, consisted of supervising Master students, occasionally Ph.D. students, and teaching basic courses in research methodology, as well as sector specific courses. If applied in a European or international setting, this would not normally be called research cooperation.

As the long-term programmes show, an element of capacity building may be necessary before real cooperation can start. At the Karolinska Institute, much of the research is done by people in the beginning of their careers, but who have their doctoral degrees since a few years back. At the Hanoi Medical University, there is a generation gap. The older generation is approaching retirement, and had much of their education in the Soviet Bloc countries several decades ago. The younger generation are still at the Masterlevel, and have no modern research training yet. The Swedish researchers are unlikely to find it professionally challenging to work with the former, and it takes time before the latter become fully competent partners. This will happen in due time, but initially, there must be a focus on capacity development in this particular programme.

A programme could focus on capacity building or on cooperation. The problem with the former is that it puts the Swedish partners in the role of consultancy firms in technical cooperation; a role they mostly do not have either experience or aptitude to do well in. The problem with the latter is that the conditions for mutual interest may not occur that easily. However, rather than rushing in to a new programme, it is worth waiting for the research interests to develop. It is quite clear that the programmes where capacity building was most successful also had strong elements of mutual research interest. The university institutes do not cope well with pure technology transfer, there is a need for the intellectual excitement of joint research. The cooperation programme must not be too basic, it must be positioned at the front end of research (applied, but front end).

5.6 Limits to expansion

The present research programme has a budget of SEK 56 million for the three-year period. This represents an increase of 25% over the previous three-year period. The period before that had an allocation of 35 million, so there was an increase of 28% in that allocation. So the programme grew first by 28% from the period 1994–1996, to 1997–1999, and then by 25% to 2000–2002. It is a fairly rapid expansion.

At the same time, the content developed. The programme of 97–99 consisted of 5 major programme areas, institutional support to MOSTE, and some projects that were phased out, and a few new areas that were explored. The previous programme was focused on three scientific sectors, but there were many scattered projects within these. As we have seen, the present programme

consists of 9 scientific programmes, plus three general support areas. Not only has the programme increased in size, it has also become more diversified. In fact, the nine different programmes have few contacts with each other, many of them actually have nothing at all in common with the others.

The programme has done well, so it is logical that the performance is also recognised through increasing allocations. The subject is brought to attention here because an expanding and more complex program also requires more managerial attention. It is necessary to monitor the development of mutual interests, to encourage networking, suggest managerial changes, and the like, If and when things fail – and they do, sooner or later – it is SAREC and MOSTE who must solve the problems. The programme in Marine Environment is an example, when the Swedish institutions fail, it fell on SAREC and MOSTE to look for another cooperating partner and to help the Institutes establish contacts with these.

If the programme is to continue expanding, it is probably necessary to allocate more time from SAREC and MOSTE. Indeed, even the present programme may have reached the limits, as there are a number of difficult issues outstanding regarding audits, quality control, and the like. The delays in starting the new programme on information technology also indicate that programme management needs to be reinforced – or the programme made more manageable.

5.7 The roles of Sida/SAREC and MOSTE

Both SAREC and MOSTE have a close relationship to the programme. Their management appears to be operational and hands – on. The contacts between these two organisations are very frequent and cordial – as they must be for the programme to work. MOSTE has a firm command of, and good working relationships with, the Vietnamese institutions that fall under its authority. Interministerial co-ordination appears to be a problem, in Vietnam as elsewhere. The research institutes that do not sort under MOSTE face complexities in funding, auditing and performance management. Even if the programmes achieve their targets, the bureaucracy appears to slow down administration.

Sida is a large organisation, and SAREC by virtue of its history has an independent position in the organisation. At headquarters in Stockholm, there appear to be few links between the SAREC programme in Vietnam and other bilateral programmes. There are no venues for formal co-ordination, and informal co-ordination by mutual adjustment is not much practised. The Swedish Embassy in Vietnam would, in theory, have a more operational role to play on the programmes. The research programme is still controlled by SAREC in Stockholm. Strategic intent, as well as tactical and operational management, and control are in the hands of SAREC. The role of the Embassy is marginal, and there were occasions in the past when the Embassy was hardly informed of the programmes. These days have passed, but research cooperation still does not figure prominently on the agenda of the Embassy.

The fact that SAREC and MOSTE have a hands-on approach to management, that SAREC plays several roles in relation to the programme, and that the Embassy is not much involved, further underlines the need for management attention to the programme. These managerial features are not problems in themselves. On the contrary, the programme has performed well in the past, and can do so in the future. But if SAREC is to keep its roles, some of the programme characteristics may need to change. The alternative is to strengthen SAREC itself with additional manpower resources. The managerial tasks take time, and there is a limit to how much the desk officers can attend to. It is well known that Swedish public agencies are not allowed to grow. On the contrary,

they are expected to become leaner, and it is more likely that programme management will have to do the same job with fewer resources.

5.8 Project or programme approach

The three-year programmes of the past have all consisted of a number of different research activities, often quite separate from each other. In common administrative jargon, it would be more appropriate to speak of a group of projects, than a programme. A programme would normally imply that there is a common target, joint objectives, and some form of co-ordination of inputs. There is of course a common denominator in that Sida/SAREC supports research capacity in Vietnam and builds on cooperation between Swedish and Vietnamese institutes. The question is if that is enough?

A possible argument could be that, as long as the programmes work well, there is no need to be concerned about the number of components. If there is a need for several small scale projects, if that is what serves the Vietnamese scientific community best – so be it! That it would look better on paper with a more focused programme is a matter of bureaucratic neatness that need not be of any practical concern.

However, there is a practical concern, and that is the managerial support that can be provided by SAREC and MOSTE. Too complex and diverse components, make it more likely that they fail. There are some activities under the present programme that do not perform as well as the others. A more focused programme, held together in a few substantive areas – could mobilise capacities from other network members. In addition, either MOSTE or SAREC would be closer to the problem and would have more capacity to assist in resolving the issues.

A new three-year programme could thus be focused on two or three thematic areas, and within each of these, there could be a network of three to five, or more, Vietnamese institutions. The Swedish organisations would consequently also have to be several. Such networks could have an impact quite beside the production of research results. Network management is an organisational skill in its own right, and this would expose the participants to such practice. Furthermore, the thematic areas could be designed to bring together universities and research institutes in the practical activities, and thus help to bridge this rift in the Vietnamese scientific community. In the long run, network constellations on the domestic scene will strengthen Vietnamese research internationally, and will prepare for integration in regional networks in the future.

It is beyond the scope of this evaluation to suggest the subjects of these programmes. A priori, there is no reason to disqualify any scientific field, as long as it is a priority area of MOSTE and Sida/SAREC. But if the evaluation has nothing to say about *what* programmes to focus on, it may have something to add on *how* to do it. The interviews and the documentation point to a number of best practices, and the next chapter summarises these. It could actually be seen as a checklist; if an emerging programme does not exhibit the features described here, it may be better to abandon the idea.

6 Lessons learned

6.1 Recognising mutual interest

The starting point for most of the universities and research institutes is when they are approached by MOSTE or SAREC and solicited for their interest to participate. Someone from the Swedish organisation may be invited to undertake a fact-finding mission to Vietnam. A future programme coordinator from Vietnam may be asked to pay visits to Swedish universities to familiarise him/herself with the competencies there. It is very difficult under such circumstances not to become enthusiastic about the prospects for cooperation. That applies to both the Swedish and Vietnamese researchers.

Hence it is so much more necessary for programme managers to critically assess whether the mutual interest in research questions is there, and it is not only interest but also commitment and capacities. Furthermore, future cooperation cannot depend only on one or two persons. It may be sufficient if there is a limited number of Vietnamese counterparts, as the personnel turnover is so low in the Vietnamese organisations. But in the Swedish organisations, it is necessary both to have an operational manager/coordinator who is committed, and a group of other researchers. It may not show in the data above, but there were always a small group of Swedish researchers on the successful programmes. The Board of the university or institute also needs to be convinced about the virtue of cooperation.

Friendship is seldom taken seriously in the administrative sciences, and it is rare that consultants, evaluators, or other experts make any fuss over it. Friendship tends to be particularistic and idiosyncratic. Still, we all know how ubiquitous friendship is as a social force. True friendship is held together not just by interests but also by shared ideals. Friendship can be a prime factor in processes of structural and normative change, and it appears to be one of qualitative characteristics of cooperation on good programmes.

6.2 The role of personalities

Cooperation is done by people, and it appears as if some personal characteristics are more desirable. Research cooperation is long-term. Some of the programmes studied here lasted for 15 years, some other may last equally long before they are phased out. Perhaps future programmes will have even longer time horizons. Be that as it may, it would seem appropriate to look for projects coordinators who possess;

(a) communication skills, which means not only the ability to command English and possibly other foreign languages well, but who can both listen carefully to others, communicate the ideals, wishes and intentions of themselves and their colleagues;

(b) negotiation skills, which is the ability to set realistic targets for a negotiation process, formulate a strategy to reach the objectives, perceive when it is necessary to modify one's bargaining position, and when to press home an advantage without antagonising the negotiating partner. In negotiation, it is also necessary to have a good understanding of cultural differences in negotiation styles;

(c) network building skills, which goes beyond communication and negotiation in understanding the administrative challenges of networks, an ability to design structures and processes that work well, and to solve problems by using the network resources, rather than by resorting to hierarchical decision making; and

(d) the ability to inspire trust and confidence among others.

6.3 Sida/SAREC competence and capacity

When the programme in Farming Systems Research was formulated, the SAREC programme officer had his own research background in agricultural sciences. When the emphasis on health programmes in past programmes emerged, the SAREC programme officer possessed a background in health research. It cannot be avoided that professional interests and inclinations have an impact on how duties are discharged. On the contrary, people are employed to make use of their past experiences.

The point is that if a new research area is to be created in the next programme, for example, in biotechnology, then it is necessary to make sure that SAREC has the necessary competence to assess the emerging background, contribute to the scientific exchanges, and to engage in a substantive partnership with the cooperating institutions.

In theory, backstopping competence could perhaps be bought as consultancy services. However, this does not generate the long-term commitment that people in the organisation have. It may lead to conflicting roles for the persons engaged. The evaluation cannot answer these questions, and it is futile to speculate before a new area is seen to emerge. But it must be repeated that the connection between successful programmes on the one hand, and SAREC programme officer's research interests are too strong to neglect.

6.4 MOSTE programme ownership

As it is a programme of cooperation, MOSTE's ownership of activities is of course not as singular as if it was a domestically financed programme. Some decisions have to be taken bilaterally, and there are by necessity compromises. Still, with these caveats in mind, the programme ownership has to a large extent been Vietnamese. The programme reflects Vietnamese priorities – although at times there has been a discussion of which areas to include. In the past, Sida/SAREC may have promoted subjects that were not highest among the Vietnamese priorities.

National ownership is a necessary precondition for an effective programme. It can be ascertained at two levels. First, negotiations between Sida/SAREC and MOSTE are undertaken with due respect for the positions of each organisation. The partners consult each other throughout and jointly decide on management issues. Second, the research activities must similarly be "owned" by the Vietnamese organisations. This means that the Vietnamese researchers possess a vision of the results they wish to achieve, have planned their cooperation, and keep track of progress.

The additional requirement of mutual interest must be combined with a command of the process from the Vietnamese institutions. This may sound more difficult than it is, as there are several programmes at present who maintain that combination of firm national ownership and initiative with enlisting an interest from the Swedish partners. In fact, it is probably true that an institution

that manifests ownership of the research program is a more interesting partner than one that does not.

6.5 Decision-making procedures

In research cooperation there are a number of critical decisions, for example selecting candidates for training abroad, selecting research topics, decisions that a thesis is ready to be defended, participation in workshops, and the like. It is important that such decisions are transparent; that it is clear who takes the decisions, that the decision makers have legitimacy by virtue of representation, that the criteria for the award of privileges or allocation of resources are clear, and that the resulting decisions are made public. The evaluation noted many examples where such rules where set and followed.

6.6 Monitoring, auditing and financial control

The programmes submit annual progress reports, and no more should be necessary. The qualities of these reports reflect the achievements of the programme. Those that have achieved much, usually present achievements in clear, unambiguous terms. Those that lag behind, use abstract language, speak more of plans than of past events, and generally beat around the bush. It is necessary to pay close attention to the quality of progress reports, to detect problems early and prepare assistance.

Financial audit is regulated in the cooperation agreements, and there is not much to say about it here. Obviously, programmes that cannot present audited financial statements on time should be discontinued immediately.

6.7 Research quality control

Science has its own systems of quality control. Papers of low quality simply do not get published. But it is better if problems are detected early. If the spirit of cooperation is frank and open issues of, for example, design of questionnaires, sampling procedures, mechanisms of handling responses and accounting for lack of responses, choice of statistical methods, and so on, are discussed. All partners on the programme have a responsibility to address such issues when they emerge. There can never be too much quality control, indeed scientific endeavour is a never-ending process of quality control.

6.8 Phasing out strategy

It is useful to consider how and when a programme of cooperation should come to an end. Designing an exit strategy as part of a programme proposal can solve much anxieties, uncertainties and disappointment later on. Even if the bilateral programme continues, the components will change, and the more smoothly this can happen, the better for all concerned. Programmes may be phased out when targets are achieved, and they may also be changed to new forms of cooperation – without the use of ODA funds, or with forms of research grants. The point is that the transformation should be planned before it becomes a crisis.

The issues that were noted above can also serve as a countercheck; that is, we can try to see to what extent the 9 programmes are characterised by these features. Table 6.1 provides an overview of the organisational, structural and procedural characteristics of the programmes. The X marks in the table indicate that the programme does well in respect of that particular attribute; for example, there is a mutual interest of the partners in Forestry Research, as well as in Farming Systems Research and the three others lower in the column. The table should be read with care, and it does not necessarily imply a criticism of the partners, as the features desirable in a cooperation programme may not be the same as are required in other parts of the life of an institute or an organisation. These are issues that cannot be treated in the evaluation.

Table 6.1 Management features of the cooperation programme

Programme	6.1*	6.2	6.3	6.4	6.5	6.6	6.7	6.8
Forestry Research	X	X	X	X		X	X	
Farming Systems Research	X	X	X	X	X	X	X	X
Plant Diseases Control		(X)**	X	X			X	
Marine Environment		(X)		X				
Rare Earth Materials	(X)	X		X		X	X	X
Health Systems Research	X	X	X	X	X	X	X	
Hanoi Medical School	(X)	X	X	X	(X)	(X)	X	
Social Sciences			X					
Science and Technology Policies		X		X		(X)		

* the columns are named according to the titles of chapter 6, and the column head indicates the relevant section.
** brackets are used to indicate a slight questionmark in respect of that particular feature of the programme.

The table can serve two purposes; (1) it indictates which programmes that are more prone to problems, that are more risky in terms of delivering research results and impact, and (2) it points at aspects of programme management that needs to be strengthened. It is thus a rudimentary map of areas that can be subject of practical and concrete capacity building efforts. But it also indicates programmes where it would be prudent not to expect significant results in the near future.

References

Ackoff, R. and Emery, F. (1972) On Purposeful Systems. Aldine Atherton: Chicago and New York.

Carlsson, J. and Wohlgemut, L. (1996) Capacity Building and Networking: A Meta-evaluation of African Regional Research Networks. Sida Evaluation 96/45

Le Dinh Kha (2001) Effectiveness of SIDA – SAREC on Forest Tree Improvement in Vietnam. (unpublished progress report) RCFTI, Hanoi

NACESTID (2001) Evaluation of Vietnam – Sweden Cooperation Programme Library Support Project. (Unpublished report) NACESTID: Hanoi

Nakamura, H. (1986) A Comparative History of Ideas. Kegan Paul: London and New York.

SAMBAND (2001) Tidskrift om forskningssamarbete med u-länderna. Sida/SAREC; Stockholm

Sida Evaluation 98/38. Swedish Support to University of Eduardo Mondlane in Mozambique

Sida Evaluation 01/12. Sida's support to the University of Asmara, Eritrea; College of Science and Faculty of Engineering.

Sida/SAREC (1998) Riktlinjer för forskningssamarbete

Tostensen, A. et. al (1998) Building Research Capability in Africa. Research Council of Norway: Oslo

Söderbaum, F. (2001) Networking and Capacity Building: The Role of Regional Research Networks in Africa. European Journal of Development Research, Vol 13, no 2.

UNDP (1996) Who are the Question-makers? UNDP: New York.

World Bank (1998) Assessing Aid. What Works, What Doesn't, and Why. World Bank, Washington, D.C.

Annex 1

Terms of reference for consultancy support to an evaluation of Research Cooperation between Vietnam and Sweden

Background

Research cooperation between Vietnam and Sweden goes back 20 years, when support through SAREC was initiated. During these 20 years the programme content has developed. The present agreement, which is a three-year agreement from 2000 to 2003, emphasizes research in the medical and agricultural sectors with training components at MSc and PhD levels.

As the present agreement is coming to an end in January 2003, it is time to take stock of the experiences and to review the results that have been realised so far. This will be done through a participatory evaluation process, with the addition of an external assessment component. The evaluation process is estimated to take place between September 2001 and January 2002. This will allow the partners sufficient time to use the evaluation findings in discussions and negotiations for future cooperation.

More specificially the evaluation process shall:

- Document the results of the research programmes that were funded
- Analyse the impact of research findings
- Document training activities
- Analyse the impact of training
- Document the capacity building activities of the programme
- Analyse impact of capacity building, in particular its institutional development effects
- Describe and analyse the organisation of research cooperation
- Relate the SAREC programme to broader issues of research policy, research coordination and higher education.

In order to maximize the utility of the evaluation process, SAREC has chosen a combination of participatory methods – to be supplemented by an external assessment of a formative nature. In a first phase of the evaluation process, the cooperating partners will jointly document and analyse the cooperaion process. In a second phase, an external consultant will synthesise the results, analyse the organisational and institutional features of the programme, and suggest how a new programme can be designed. These suggestions will form the base for continued discussions and negotiations between SAREC and the Government of Vietnam.

Purpose

These terms of reference specify the work which is to be done by the external consultant to the evaluation process. The purpose of the support is threefold:

(e) To provide advise and support to the participatory evaluation process. The consultant shall be present at a workshop in Vietnam, where the evaluation process is initiated, and shall – upon request – provide advise on evaluation objectives, methods, and process issues that may arise during the workshop.

(f) To synthesize the evaluation findings and to analyse the broader farmework of research policy, research coordination and higher education, and to identiofy ways and means of how SAREC's contribution in these fields can be utilised in future programmes of research cooperation.

(g) To present the findings in the form of a written report, to introduce the report and take part in discussions with the partners as a first step in the design of a new programme.

The synthesis report is in particular expected to cover issues relating to (a) focus and coordination of the programme, (b) network building and regional cooperation, and (c) coordination of the SAREC programme with other Sida activities in Vietnam.

Methods

Evaluation methods can be described at three levels in connection to this evaluation. First, there is the overall approach of participatory evaluation, which sets the stage for the utilisation of findings in the development of a new programme. The methods of participatory evaluation are described in "Who are the Question-Makers?", published by UNDP. The external consultants will work according to the expectations inherent in this approach.

Second, the empirical data collection that will lead to the documentation and analysis of results will be undertaken by a mixture of interviews, questionnaires, observation and document review. This actual combination of methods will be determined during the workshop, and the methods will be applied by the partners in the programme as their input to the evaluation.

Third, the production of a synthesis report will build on the empirical data collected as described above, supplemented by interviews conducted by the external consultant. The interviews will be conducted with representatives of the Vietnamese government, Vietnamese researchers, and Swedish researchers. It may also be desirable to interview representatives of other constituents who have a stake in research, such as industry confederations, the medical community, and other government ministries.

Work Plan

The work to be conducted by the external consultant can be divided into four steps.

5 Preparation for the participatory evaluation workshop; studying and analysing the programme, collecting and sending information to SAREC, preparing inputs to the workshop, and taking part in the workshop.

6 Reviewing the results of the participatory evaluation exercise, assisting in the analysis and contributing to the interpretation of findings.

7 Conducting supplementary interviews in Vietnam and Sweden, desk study and analysis of the cooperation process, developing recommendations and producing a synthesis report. All collaborating institutions will be visited, and a total of 5 to 10 other organisations may be consulted.

8 Presentation of findings, discussion with partners in the cooperation process.

The total time allowed for the four steps, including travel can be estimated as follows:

Step 1.	5 working days	September 2001
Step 2.	5 working days	October 2001
Step 3.	19 working days	October–December 2001
Step 4.	3 working days	January 2002

Reporting

The evaluation report shall be written in English. Format and outline shall follow the guidelines in Sida Evaluation Report – a Standardized Format. Six copies of the draft report shall be submitted to Sida no later than 2002-01-15. The draft report shall be presented for comments at a workshop in Vietnam in January 2002 with participation of Sida and Vietnamese stakeholders. Within three weeks after the workshop a final version shall be submitted to Sida in six copies and on a diskette. A presentation of the final conclusions shall be done at Sida.

Subject to decision by Sida, the report will be published and distributed as a publication within the Sida Evaluation series. The evaluation report shall be written in Word 6.0 for Windows (or in a compatible format) and should be presented in a way that enables publication without further editing. The report shall begin with an Executive Summary and close with a selection of Conclusions and Recommendations.

Annex 2

Programmes, partners and contact persons on Vietnam-Sweden Research Cooperation Programme 2000–2002

VIETNAM-SWEDEN RESEARCH COOPERATION PROGRAMME 2000-2002

(UPDATED: DECEMBER 2001)

NO (1)	TITLE OF PROJECT (2)	PROJECT OBJECTIVES (3)	APPLYING INSTITUTION (VN) (4)	COLLAB.ORATING INSTITUTION (SWE) (5)	TOTAL BUDGET 2000-2002 (6)
1.	STUDY ON INTEGRATED COASTAL MANAGEMENT (ICM)	Application of Integrated Coastal management (ICM) Programme for Sustainable Environmental Management of Coastal Area in Vietnam *Long-term objective* Provision of a sound basis for sustainable development, management of resources and protection of environment in coastal zones *Immediate outputs:* - Enhancement of knowledge of coastal zone systems and their resources; - Databases design & analysis; - Training on GIS and modeling and ICM; - Improvement of research equipment and lab facilities - Recommendations for sustainable development	1) Institute of Nha Trang Oceanography(NIO) 1 Cau Da, Nha Trang, Khanh Hoa *Contact person:* Dr. Nguyen Tac An, Director Tel: (84-58) 590035, Mobile: 0913460885 Dr. Vo Si Tuan, Vice-Director Tel: (84-58) 590205 Address: 01 Cau da, Nha Trang Fax: (84-58) 590033/34 E-mail: haiduong@dng.vnn.vn		4.500.000
		Environmental monitoring and prediction (EMP) and integrating EMP data into coastal management plan development in Vietnam *Long-term objective* to contribute to integrated coastal management plan of Vietnam. *Immediate outputs:* - To upgrade capability of HIO in design and implementation of coastal/marine environmental monitoring programme of Vietnam - To efficiently use laboratory facilities of environmental monitoring & modelling through LAB technical training for technical staff. - To develop capability of the Institute to prepare an ICM plan using the environmental profile.	2) Hai Phong Inst. of Oceanography (HIO) 246 Da Nang Str.; Hai Phong *Contact person:* Dr. Ng. Chu Hoi Director, HIO Tel: (84-31)846523 Mobile: 0903436841 Fax:(84-31)761521 E-mail: nchoi@hio.ac.vn		
2.	STUDY ON	Farming Systems Research	University of Agriculture and	Dept. of Animal Nutrition and	8,000,000

	INTEGRATED FARMING SYSTEMS RESEARCH	(Including Livestock Production and a Ph.D Programme) *Long-term objective* To develop the research capacity of the Vietnamese institutions through post graduate training MSc & PhD and carrying out high quality, on-farm where appropriate, scientific researches on sustainable tropical livestock systems. *Immediate outputs:* - To improve methods of processing the biomass such as casava, sugar cane, multipurpose trees, with emphasis on the use as feed. - To improve the effeciency of appropriate livestock species (pigs, duck, buffaloes, dairy cattles.. in utilizing the residues and agro-processing by-products from food and fuel crops)	Forestry- Ho Chi Minh city and others Thu Duc District, HCMC *Focal Contact person* 1. DR. Bui Cach Tuyen, Rector (84-8) 896 0711 2. Dr. Luu Trong Hieu, National Coordinator Tel:(84-8) 8966946 (Office) (84-8) 9306361 (Res) (Anh Nguyễn Văn Công) Fax:(84-8) 8960713 E-mail: htqt-uaf@hcm.vnn.vn **lthieu@hcm.vnn.vn** 2. Dr. Le Viet Ly Coordinator for NIAH Tel:(84-4)8343971 Fax:(84-4)8344775 E-mail: niah@netnam.org.vn 3. Dr. Vo Van Son Coordinator for CTU Khoa Nong nghiep, Khu 2; Đường 3/2, TP Cần thơ Tel:(84-71)830786 Fax:(84-71)830814 E-mail: vvson@ctu.edu.vn 4. Dr. Le Khac Huy Coordinator for HU Tel:(84-54)822535 Fax:(8454)824923 E-mail: hua@dng.vnn.vn	Management Swedish University. of Agriculture Sciences P.O.Box 7024 S-750 07 Uppsala, Sweden *Contact person* Dr. Brian Ogle Tel:(46)(0)18672061 Fax:(46)(0)18672995 E-mail: BrianOgle@huv.slu.se	
3	STUDY ON FOREST TREE IMPRVMNT	Research on forest tree improvement serving the reforestation programme of establishing 5 millions hectares forest in Vietnam *Long-term objective*	- Research Center for Forest Tree Improvement (RCFTI) of Forest Science Institute of Vietnam (FSIV)	Forest Research Institute of Sweden (SKOG-FORSK), Uppsala, Science Park *Contact person:*	

		Research on forest tree improvements *Immediate outputs:* - Strengthening research capacity on forest tree improvement; - Breeding and propagation of some main tree species; - Research on soil improvement ability of some selected and/or newly created germplasms. - Social forestry modeling - Post-graduate education (20m/m in SWE & 20m/m in VN) - Tech. Professional training (20m/m); - Participating Intl' WSs (30weeks/m abroad and 20weeks/m in VN) - Publications & Information dissemination.	Chem, Tu liem, Hanoi *Contact person:* Dr. Ha Huy Thịnh, Director Tel:(84-4) 8525223 Mobile: 0913302971 Dr. Phí Quang Điện Coordinator Tel:(84-4) 838-9813 Fax:(84-4) 836-2280 E-mail: rcfti@netnam.org.vn	Dr. Gunnar Jansson Tel:0046 18 18 8500 Fax: 0046 18 18 8600 E-mail: **skogforsk@skogforsk.se** **Gunnar.jansson@skogforsk.se**	
4	STUDY ON HEALTH SYSTEMS	Health systems research in Vietnam: Strengthening research capacity *Long-term objective* To promote rational decision making about priority health problems at various levels of Vietnam health care system. *Immediate outputs:* - To strengthen Epidemio- -logical Field Laboratory in Ba Vi districtas a tipical setting for research training and health intervention - To continue research training for students; - To organizer seminars and workshops to promote dialogue between researchers and policy makers to address urgent issues in the health care system in Vietnam	Health Strategy and Policy Institute (HSPI) 138 Giang Vo, Hanoi *Contact person:* PhD. Ng. Thi Kim Chuc, Coordinator Tel: (84-4)846-3803/04 Mobile: 0913238371 (Ms. Oanh), Assistant to Coordinator, Tel: 8757698 (Res.) Fax:(84-4)823-2448 E-mail: hspi@hn.vnn.vn ntkchuc.hspi@hn.vnn.vn **maioanh2000@yahoo.com**	- Division of International Health Care Research (IHCAR), Dept of Public Health Sciences, Karolinska Institutet Stockholm , Sweden Tel:46.8.7286929 Fax:46.8.311590 *Contact person* Prof. Vinod K. Diwan - Division of Intl' Health Care Research (IHCAR), Dept of Public Health Sciences, Karolinska Institutet Stockholm , Sweden Tel:(46-31)69 39 24 Fax:(46-31)69 17 77 E-mail: **vinod@nhv.se**	3,700,000
5	STUDY ON TREATMENT OF PREVALENT DISEASES IN	Applying techniques of immunology, molecular biology and genetics for the study of pathogenic agents, pathology, substance metabolism and clinical pharmacology in acute and chronic infection, non-infectious diseases in Vietnam	Hanoi Medical School 1 Ton That Tung Str.; *Contact person:* Prof. Nguyen Van Tuong Tel:(84-4) 852-5116	Karoliska Institute SE-171 77 Stockholm, Sweden *Contact person:* Prof. Hans Rosling Tel:+46 8517 76498	6,000,000

	VIETNAM	*Long-term objective* To promote the application of modern advances in biotechnology and bio-medicines in rational diagnosis, control and treatment of prevalent diseases in Vietnam *Immediate outputs:* - Conducting research on the following a) Diagnosis of diarrhea diseases; b) Helicobacter pylori infection in Vietnam; c) Pesticide and dioxin metabolism and their effects on health in Vietnam d) Immuno-modulators and chronic inflammatory diseases. e) Hypoglycemic effects of some herbal medicines for treatment of diabetes mellitus. f) Biological active peptides from natural resources.	Ms. Huong, Project Office Tel:(84-4) 852-4000 Fax:(84-4) 852-5115 Trường ĐH Y, Phòng N/c Khoa học, Mr. Nguyễn Ngọc Hùng: 8527622	Fax:+46 831 1590 E-mail: hans.rosling@phs.ki.se Dr. Andrej Weintraub Tel:+468 746 10 00 Fax:+468 711 39 18 E-mail: **andrej.weintraub@impi.ki.se**	
6	LIBRARY SUPPORT	Institutional Scientific Library Support *Long-term objective* To strengthen national research capacity through providing qualified library & information services. *Immediate outputs:* - To support the Central Library for S&T in developing and optimizing its collections and improving user services. - To train key staff/lecturers (4 MSc).	National Center for S&T Infor. and Doc. (NACESTID) 24 Lý Thừng Kiệt, Hà Nội *Contact person:* Dr. Tạ Bá Hưng, Director Tel: (844)9349123 Fax:(844)8263127 Ms. ThuLan: 9349127 E-mail: bhung@vista.gov.vn	SAREC/Sida	2,000,000
7	STUDY ON RARE EARTH MATERIALS	*Long-term objective* To complete the technology for preparation of RE alloys *Immediate outputs:* - To support one more year for two PhD sandwich students to complete their thesis. - 20 publications in specialized journals.	Institute of Materials Science (IMS) of NCST Hoang Quoc Viet Str.; Nghia do, Cau giay, Hanoi *Contact person* Dr. Dang Vu Minh, Director Tel:(84-4)835-4076 Fax:(84-4)836-4403 Prof. Nguyen Xuan Phuc Tel/Fax:(844)8364403	- Dept of Materials Science, Uppsala University; Box.534-SE-751 21 Uppsala, Sweden *Contact person* Prof. Lennart Hasselgren Tel:(46)18 471 3576 Fax:(46)18 471 3495 E-mail:	2,000,000

			phucnx@ims.ncst.ac.vn Tel: 7564283 (Mr. Phuc) Tel: 8362251 (Mr. Hong)		
8	STUDY ON PLANT DISEASES CONTROL	Plant Diseases Control in Vietnam *Long-term objective* Strengthening the biotechnological capacity of national pathology research in crop improvement programs in Vietnam *Immediate outputs:* - Develop novel and environment-friendly methods of pathogen control based on the understanding of the pathogens biology and on their interaction with host plants. - Phytosanitary certification and quarantine of planting material. - Transfer of technological outputs (virus-free materials; sensitive, reliable and user-friendly methods of diagnostic...). - Training courses on biotechnology transfer , applied in plant pathology. - Publication of research papers.	Plant Molecular Pathology Department (PMPD) , Institute of Agricultural Genetics (IAG) Co Nhue, Tu Liem, Hanoi *Contact person:* Dr. Le Thi Anh Hong Tel: (84-4)836 4295 Fax:(84-4)754-3196 E-mail: anhhong@ncst.ac.vn Anh Hồng: 8215576 (NR) Mobile: 0913066676	Swedish University of Agricultural Sciences (SLU) P.O. Box 7044 S-750 07 Uppsala Sweden. *Contact person* Prof. Berndt Genhardson Head, Plant Pathology and Biological Control Unit Tel: 46(0)-18-67-1600 Fax: 46(0)-18-67-1690 E-mail: Berndt.Gerhardson@vpat.slu.se	2,000,000
9	IT/STE NET	a) To provide internet conductivity to all those institutions whwre Sida/SAREC supports long-term research cooperation, and b) to biuld technical and management capacity in information technology	Informatic Center/MOSTE 39 Trần Hưng Đạo, Hà nội DR. Mai Anh, Director Tel: (84-4) 824 2510 Mb: 0913209955	SAREC/Sida	
10		STRENGTHENING VIETNAM'S TECHNOLOGICAL CAPABILITIES TO ENHANCE COMPETITIVENESS AND SUSTAINABLE DEVELOPMENT	National Institute for Science and Technology Policy and Strategy Studies (NISTPASS) 38 Ngo Quyen Str.; Hanoi *Contact person:* Dr. Lê Đình Tiến, Dir. Tel: (84-4)8251563 0903431752 Fax: (84-4)825-2873 E-mail: ct-vnrp@hn.vnn.vn nistpass@hn.vnn.vn		2,500,000
11	SOCIAL	1) Rural families in Vietnam: The dynamics of	Institute of Economic -		5,000,000

	SCIENCES	change and continuity : A multidisciplinary study 2) To study barriers to Liberalization of Trade in Viet Nam.	National Center for Social and Human Sciences (NCSSH) 27 Tran Xuan Soan, Ha noi *Contact person:* Dr. Ha Huy Thanh Deputy Director IOE Tel: (84-4) 9784098(NIO) Fax:(84-4) 9712247 E-mail: canpro@hn.vnn.vn Dr. Do Hoai Nam: Tel: 9783953 0913234235	Mr. Hà: 9780978(CQ) 7626666(NR) Mr. Thắng (Toàn cầu hoá) 0903288909	
12	OPEN FUNDS	The Open fund is used for both Sida/SAREC and MOSTE for costs of international travels in connection with visits to Viet nam and Sweden, small planning grants, costs for workshops and seminars arranged in connection with follow-up of the colleboration, costs for communucation with the cooperation etc..The utilization of this fund is mutually decided upon between Sida/SAREC and MOSTE.	International Relations Department/MOSTE 39 Tran Hung Dao , Ha noi Dr. Thach Can, Director Tel: 822-8874, Fax: 943-9987 Mr. Tran Dung Tien Tel: 943-6688	Sida/SAREC	6,000,000
					54,300K

MOSTE's contact person: MR. TRAN DUNG TIEN TEL: (84-4) 934 66 88, O9O3484808	SWEDISH EMBASSY: TEL:845-4824, FAX:823-2195 BO GOHL: **bo.gohl@sida.se** SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY Address: S-105 25 Stockholm, Sweden. Office: Sveavägen 20, Stockholm Telephone: + 46 (0)8-698 50 00. Telefax: + 46 (0)8-20 88 64. Sida's Homepage: **http://www.sida.se**

Other persons: Mr. Hang, Hanoi National University 8362990
Mr. Hung, Nha Trang Fishery University: (058)833446 (Off.), 810869 (Res.), Fax: 058-831147

Annex 3

Minutes from preparatory workshop
Hanoi, Thursday 27 and Friday 29 of September 2001

Agenda:

Day 1

08.00 – 09.00	Opening
09.00 – 11.30	Session 1. Defining criteria of success
13.30 – 16.30	Session 2. Self-assessment of research cooperation

Day 2

08.00 – 11.30	Session 3. Lessons from the past and design of future programme

General comment:
Within the overall evaluation process, the workshop had three distinct purposes; (1) to inform the partners in the programme about the evaluation and to create links between the external evaluation facilitator and the programme coordinators. (2) to jointly elaborate on the criteria of a successful programme, and (3) to take the first steps in analysing the results and discussing the future programme based on these.

Summary of session 1
The main point of the discussion was to agree on the criteria of evaluation. The evaluation will be expected to pronounce value judgements on the programme, so what constitutes a good and successful programme? The participants agreed on the following issues to be covered in the evaluation:

- Impact, is the first and foremost quality. The participant agree that the cooperation is expected to yield research results that have an impact on society. Impact was discussed in terms of affecting economical life, social life and the environment.
- Research results, or outputs. The participants also agree that the cooperation must be assessed in terms of the numbers of research findings produced, for example, papers, books, conferences, courses.
- Research training, that is, capacity building in terms of human resources. Number of Ph.D. students that have completed their work, number of master's students that have completed training, as well as other training programmes.
- Project management; national ownership of programmes, the cooperation between Swedish and Vietnamese researchers, coordination, equipment and technology
- Sida/SAREC's role; continuity, consistency, professionalism, timely decisions, bureaucracy?
- MOSTE's role; vision and initiative, ownership, accountability, implementation capacity, cooperation among ministries, matching budgets, bureaucracy?
- Programme objectives; clarity, consistency, relevance and communication
- Programme characteristics; focus, comprehensiveness, coordination, integration and flexibility.

The second session contained a brief presentation of each programme, stating the purpose of the research cooperation in that field, and its particular outputs and achievements.

The third session discussed the future of the programme. The participants recommended:

(h) Build on past achievements

(i) More integration within and between projects

(j) Comprehensive support, include research funds

(k) Link with regional institutes

(l) Focus on some areas, phase out other projects

(m) Form national committees with coordinators

(n) Create a programme with a few priority areas

(o) Emphasise capacity building as an objective

(p) More Ph.D. training, less masters and undergraduate training

(q) Focal points depending on proven capacities

(r) Swedish professors to play a more active role in teaching, conducting courses in Vietnam.

Annex 4

Intervjuformat för samtal med svenska universitet/institut involverade i forskningssamarbete med Vietnam

1. Inledning. Syftet med intervjun, hur utvärderingen är upplagd, kriterier för utvärderingen.
2. Bakgrund till samarbetet. Hur kom den svenska institutionen i kontakt med institutionen i Vietnam? Hur länge sedan initierades kontakterna? Vem har utformat målen för samarbetet? Vad har den svenska institutionen för intressen i forskningssamarbetet?
3. Samarbetet med Sida/SAREC. När initierades kontakterna med SAREC? Av vem? Har man andra projekt finansierade av SAREC? Utgör biståndssamarbete en betydande del av finansieringen? Hur förlöper kontakterna med SAREC? Respons, förmåga att förstå forskningssamarbetets inriktning? Hjälp att lösa problem? Styrning och kontroll?
4. Genomförande. Hur ser verksamhetsplaneringen ut? Vilken typ av avtal har man med den Vietnamesiska institutionen? Myndighetskontakter? MOSTE's roll?
5. Aktiviteter under den senaste treårsperioden. Hur mycket av gemensam forskning har genomförts? Publikationer/presentationer? Hur ställer sig detta i relation till institutionens samlade verksamhet? Stor eller liten del därav? Antal vietnamesiska besök, eller studenter på olika nivåer som varit i Sverige?
6. Planer för framtiden? Vad har de vietnamesiska institutionerna gett uttryck för? Vilka förväntningar finns? Oavslutade arbeten som måste fortsätta?
7. Erfarenheter av samarbetet. Vad har fungerat bra, och vad har fungerat dåligt? Vad bör göras annorlunda? Nöjda med resultaten?
8. Vad finns det för möjligheter att göra ett mera sammanhållet program? Vad har man för kontakter med de andra svenska institutionerna. Andra kontakter med Sida, eller andra biståndsaktörer i Vietnam?
9. Har den svenska institutionen samarbete med andra forskningsorgan i Sydostasien? Finns det några framstående centra inom området där? Kan de vietnamesiska institutionerna utveckla sina kontakter med dem?

Annex 5

Minutes from concluding evaluation workshop Hanoi, Wednesday, 30th of January 2002

Agenda:

08.00 – 08.15	Opening
08.15 – 11.45	Discussion of draft evaluation report
11.45 – 12.00	Conclusion

General comment:

Following the formative workshop in Hanoi in September, the evaluation process had now lead to a draft evaluation report, which was submitted to the participants in the workshop one week earlier. Participants came from the programmes, from Sida/SAREC (in Hanoi as well as Stockholm, and from MOSTE). The purpose was to review the evaluation report, to make sure that the report truly and accurately reflects the process of cooperation and the results achieved, and then to discuss the suggestions concerning future programmes. These minutes are written by the external consultant.

During the main session of the workshop, the evaluation report was discussed in detail, chapter by chapter. The comments and questions are listed below. Before the workshop, the report had been discussed thoroughly with MOSTE, and afterwards there was a brief presentation at the Swedish Embassy.

Summary of session 1

Chapter 1

- corrections of names and abbreviations
- starting dates of some programmes
- budget allocations should be double-checked before final version is produced (table 1.1)
- the issue of when a programme is said to start should be explained
- allocations to library support should be corrected

Chapter 2

- important to emphasise that Sida/SAREC supports independent research. This is very unusual, and makes this programme different from others. It also sets research cooperation apart from other aspects of bilateral development cooperation. This independence must be safeguarded
- further examples were given of how the results from Health Systems Research has had an impact on policies in health, particularly in respect of administrative processes involved in managing pharmaceutical supplies. It was mentioned that study on gender and tubercolosis also had affected Policy.
- yet another type of impact could be in terms of methods. It was suggested that the social science programme might have had an impact by familiarising government policy makers with econometric methods; that is, by supplying a basis for handling forecatsing with scientific methods.

- It wa s generally agreed that the analysis in section 2.4 is valid, but it was also suggested that the process whereby, for example, other Sida personnel have access to research findings can be facilitated and encouraged.

Chapter 3

- several corrections were made in respect of table 3.1 and 3.2. However, it was also explained that we must take care not to double count publications, for example, if there are articles in a Ph.D. dissertation, we can count them as articles, or the volume as a book, but not both. There was general agreement on this.
- The issue of timing was discussed. Publications entered here were those that existed and had been published in December. No planned articles are included in the tables. It was agreed that publications that were produced in December could be added if these articles were mailed to the external consultant before the final report was produced. This led to 6 publications (unpublished working papers) being added to the Social Science programme (which otherwise had nothing).
- It was noted that there is a big difference between in-house seminars and workshops and large international workshops such as organised in farming systems research. This was to be explained in the text, or perhaps through separate columns in the table.

Chapter 4

- several corrections were made in respect of tables 4.2 and 4.3
- it was discussed whether on-going training should be reflected.
- A question was raised whether it was possible to count male and female participants in table 4.2. It was agreed that this would be inserted, but the Vietnamese organisations would have to supply the information to the external consultants before the final report is to be produced (*By February 14, no such information had been provided*).
- Comments on how equipment was utilised on some specific projects
- Examples from library support of the importance of training
- Field laboratory could be seen as an example of organisational development
- Importance of networks was emphasised, several examples given of different types of networks.

Chapter 5

- no corrections here, but rather question and some illustrations.
- It was suggested that projects should be linked more emphatically
- MOSTE and SAREC could try to develop cross-cutting themes, research programmes that bridge traditional sector boundaries, as for example issues of transition economics, technological development and environment.

Chapter 6

- suggestion that the 8 points in the chapter could be summarised in the form of a table, and used to illustrate the discussion. (this point was also discussed separately with MOSTE).

The workshop concluded with agreement on a time table to produce the final report as soon as possible after February 10, and the institutes that were to add information were asked to provide this directly to the consultant.

Annex 6

People met and interviewed

Ministry of Science, Technology and Environment.
Vice Minister Pham Khoi Nguyen
Dr. Thach Can
Dr. Tran Dung Tien

Sida/SAREC
Bo Göhl
Barbro Karlsson
Anita Sandström
Anna Runebrog
Per Lundell

Vietnamese universities and Research Institutes

University of Agriculture and Forestry, Ho Chi Minh City
Dr. Luu Trung Hieu
M.Sc. Duong Duy Dong
Dr. Bui Huy Phuc
Dr. Bui Chac Tuyen

plus several research associates, newly graduated Ph.D. students and master's students, and farmer taking part in experiments

Oceanographic Institute, Nha Trang
Dr. Nguyen Tac An
Dr. Vo Si Tuan
Deputy Head of Department Do Minh Thu
Mr. Nguyen An Khang

plus representatives of the International relation Office, and people in villages taking part in extension projects

Research Centre for Forest Tree Improvement
Dr. Ha Huy Thinh
Dr. Phi Quang Dien

plus colleagues at forest sites, plant nurseries and laboratories

Health Strategy and Policy Institute
Dr. Thi Kim Chuc

plus several colleagues gathered at joint workshop to review the programme.

Hanoi Medical School
Professor Nguyen Van Tuong

Plus 6 Ph.D students in the process of research training

NISTPASS
Dr Dang Duy Thinh
Dr. Le Dinh Tien
Dr. Ta Ba Hung
Dr. Tran Ngoc Ca
Research Fellow Nguyen Hong Ha
Research Fellow Le Van Chuong
Research Fellow Nguyen Than Ha

National Centre for Social and Human Sciences
Dr. Do Hoai Nam
Dr. Bui Tat Thang
Dr. Pham Lan Huong

Plus 4 other research associates

Institute of Material Sciences
Dr. Luu Minh Dai
Dr. Vu Van Hong

Plus research associates and personnel in laboratories

National Institute of Animal Husbandry
Dr. Le Vet Ly
Dr. Le Thi Anh Hong
Dr. Dinh Van Binh
M.A. Pham Thi Ngoc Linh

Plus several young researchers, as well as farmers and field station personnel.

National Center for Scientific and Technological Information and Documentation
Mrs. Tran Thu Lan
Mr. Ta Thi Can

Swedish Universities
Dr. Brian Ogle, SLU
Professor Berndt Gerhardson, SLU
Professor Vinod Diwan, IHCAR, Karolinska Institutet
Professor Hans Rosling, Karolinska Institutet
Dr. Andrej Weintraub, Huddinge sjukhus
Dr. Ingeborg van der Ploeg, Karolinska Institutet
Dr. Kurt Almquist, Skogforsk
Professor Lennart Hasselgren, Uppsala Universitet

Recent Sida Evaluations

01/35 **Acting in Partnership. Evaluation of FRAMA (Fund for Agricultural Rehabilitation after MITCH) Ministry of agriculrure and Forestry (MAGFOR) – Sida project NIcaragua.** Bengt Kjeller, Raquel López.
Department for Natural Resources and the Environment

01/36 **Sociedad de Cooperación. Evaluación de FRAMA (Fondo de Rehabilitación para la Agricultura despues del huracán MITCH) Ministerio de Agricultura y Forestal (MAGFOR) – Asdi en Nicaragua.** Bengt Kjeller, Raquel López.
Department for Natural Resources and the Environment

01/37 **Report on the Hoanib River Catchment Study Project Evaluation. Final Report.**
Harmut Krugman
Department for Africa

01/38 **Sida's Support to the land Reform Related Activities in Estonia.** Mark Doucette, Sue Nichols, Peter Bloch
Department for Central and Eastern Europe

01/39 **Legal Services to the Poor People in Zimbabwe.** Haroub Othman, Dorille von Riesen
Department for Africa

02/01 **Mainstreaming Gender Equality. Sida's support for the promotion of gender equality in partner countries.** Britta Mikkelsen, Ted Freeman, Bonnie Keller et allis
Department for Evaluation and Internal Audit

02/01:1 **Mainstreaming Gender Equality. Sida's support for the promotion of gender equality in partner countries. Country report Bangladesh.** Britta Mikkelsen, Ted Freeman, Mirza Najmul Huda, Sevilla Leowinatha, Jowshan A. Rahman
Department for Evaluation and Internal Audit

02/01:2 **Mainstreaming Gender Equality. Sida's support for the promotion of gender equality in partner countries. Country report Nicaragua.** Ted Freeman, Milagros Barahona, Ane Bonde, Sarah Forti, Britha Mikkelsen, Guadalupe Salinas
Department for Evaluation and Internal Audit

02/01:3 **Mainstreaming Gender Equality. Sida's support for the promotion of gender equality in partner countries. Country report South Africa.** Bonnie Keller, Sarah Forti, Britha Mikkelsen, Susanne Possing, Kgotso Schoeman, Rose-Pearl Pethu Serote
Department for Evaluation and Internal Audit

02/01:4 **Integración de la Perspectiva de Igualdad de Género. Apoyo de Asdi en los países de Cooperación para el Desarrollo: Informe de país – Nicaragua.** Ted Freeman, Milagros Barahona, Ane Bonde, Sarah Forti, Britha Mikkelsen, Guadalupe Salinas
Department for Evaluation and Internal Audit

02/02 **Water Research Fund for Southern Africa (WARFSA) Project evaluation.** Harmut Krugmann
Department for Natural Resources and the Environment

02/03 **Avaliaçao do Apoio Sueco à Cultura em Moçambique 1997–2000.** Kajsa Pehrsson
Department for Democracy and Social Development

02/04 **Utvärdering av det svenska stödet till kulturen i Moçambique 1997–2000.** Kajsa Pehrsson
Department for Democracy and Social Development

02/05 **Programa de Desarrollo Local (PRODEL) en Nicaragua.** Norah Becerra, Carlos Revilla Zeballos, José Alberto RIvera Castillo, Mery Solares de Valenzuela
Department for Latin America

Sida Evaluations may be ordered from:

Infocenter, Sida
S-105 25 Stockholm
Phone: +46 (0) 8 690 93 80
Fax: +46 (0) 8 690 92 66
info@sida.se

A complete backlist of earlier evaluation reports may be ordered from:

Sida, UTV, S-105 25 Stockholm
Phone: +46 (0) 8 698 51 63
Fax: +46 (0) 8 698 56 10
Homepage: http://www.sida.se

SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
S-105 25 Stockholm, Sweden
Tel: +46 (0)8-698 50 00. Fax: +46 (0)8-20 88 64
Telegram: sida stockholm. Postgiro: 1 56 34–9
E-mail: info@sida.se. Homepage: http://www.sida.se