

**STRENGTHENING OF THE ENVIRONMENTAL
MANAGEMENT AUTHORITY OF VIET NAM**

SEMA PROJECT



RESULT ANALYSIS REPORT

MAY 1997 - JUNE 2001

**National Environment Agency
Hanoi, March 2001**

Contents

Contents	2
Background	3
Sector Problems prior to Project Implementation	4
Project Priorities	6
Organisation.....	7
Result Analysis in the Areas and Sub-Areas of Support	8
Operational Objective 1	9
An Environmental Policy and Improved Institutional Framework of the Environmental Institutions in SR Vietnam.....	9
Operational Objective 2	17
An Established Environmental Inspection Service.....	17
Operational Objective 3	21
An Effective System for the Management & Dissemination of Information about Environmental Protection.....	21
Operational Objective 4	25
Increased Environmental Awareness.....	25
Assessment of capacity building	27
Training in Vietnam.....	27
Training abroad.....	28
Utilisation of advisors and experts	29
Equipment	30
Gender balance	31
Organisation and management	31
Budget Cost Efficiency & Effectiveness	33
Conclusions and Directions for Future	36
Conclusions	37
Lessons Learned & Recommendations	38
ANNEXES	41
I Financial Situation.....	41
II Training in Vietnam.....	41
III Training Abroad.....	41
IV Study Tours.....	41
V Procurement	41
VI Local Consultancies	41
VII International Experts.....	41
VIII Publications	41

Background

On 13th May 1997 the Government of Sweden and the Government of the Socialist Republic of Vietnam signed a Specific Agreement on support to "Strengthening of the Environment Management Authority in Vietnam (SEMA) 1997 - 2000". The long-term goal or development objective of the SEMA project is to achieve:

- a) "An established capacity within MoSTE, NEA and DoSTEs to develop and implement policies and strategies and to perform other key functions within their mandate in the context of the National Plan for Environment and Sustainable Development and the Law on Environment Protection."
- b) "A strengthened capacity within the Government of Vietnam to consider environmental implications in responding to anticipated future increases in development investment."

The specific or immediate objectives are:

1. Enhanced capacity of Senior Management of NEA, in particular with relation to international collaboration, policy development and planning.
2. Strengthened institutional capacity of NEA.
3. Well trained environmental officers.
4. An effective national environmental inspection service.

The above objectives are to be reached through the following four crosscutting project components or operational objectives:

- Environmental policy and institutional matters. (This component addresses in particular objective 1; it also covers part of objective 2.)
- Environmental inspection. (Which covers objective 4.)
- Environmental information management. (Which partly addresses objective 2.)
- Environmental awareness. (This component also partly addresses objective 2.)

Although the Specific Agreement was signed in May 1997, the implementation of the project got underway only in early 1998 due to the delay in the long-term Technical Advisors assuming their positions. Therefore, effectively the project would have been implemented for less than the originally planned period of 3 years. Fortunately, it was extended by one year beyond 30 June 2000, through a consolidation phase, up to June 2001 that allowed effective completion of project activities and utilisation of project funds.

Over the project period a large number of activities were implemented and the achievements were reported in two semi-annual (1998 & 1999) and three annual progress reports (1998, 1999 & 2000). A mid-term evaluation of the project was not carried out as mutually agreed by the project partners. However, Sida established a Permanent Advisory Group (PAG) to assist them in their follow up of the project and

the PAG undertook a mission in November/December 1998 and produced a report with recommendations for improvements in project implementation. In addition, Sida commissioned an Organisational Study in June 1999 that reviewed and made recommendations on the organisational aspects of the project.

The Specific Agreement requires that during the last year of the agreement Vietnam shall provide Sweden with a Final Results Analysis Report. The final result analysis report shall be submitted to Sweden within three months of the end of the SEMA period. This report shall analyse the effects achieved by SEMA during the entire agreement period in relation to the sector and SEMA objectives and to the plan of operations. The impact of external factors shall be taken into consideration. Financial information on the utilisation of the resources made available under this agreement shall also be included in the report.

Sector Problems prior to Project Implementation

The SEMA project document identified some of the specific reasons why problems have arisen and continue to emerge within the Vietnamese environment as follows:

- The population continues to increase, leading to greater population density, cultivation into ever more marginal lands, and accelerating migration to the cities. Expansion into marginal lands is the main cause of deforestation and soil erosion, reducing agricultural productivity and endangering natural biodiversity.
- The lack of adequate sewerage and waste-treatment systems are seriously affecting water quality and endangering public health. Millions of cubic metres of inadequately treated sewage and industrial waste are discharged into river systems in Hanoi, Haiphong and Ho Chi Minh City.
- Urban air quality is deteriorating, principally as a result of the proliferation of motorised transport as household incomes rise and the process of urbanisation intensifies.
- Enterprises cannot afford effective pollution control and waste management systems. There is a lack of technical know-how, transfer of technology and management knowledge.
- The population as a whole, including most government officials, lacks environmental awareness and have only a limited understanding of the consequences of unsustainable management of the environment.
- While the Government of Vietnam is committed to sustainable development, due to a lack of knowledge, working models and capacity, government agencies responsible for the environment are not presently able to fulfil their mandate effectively.
- Local initiatives, NGOs and grassroots organisations lack guidance, funds and support, thus preventing them playing an effective part in the protection and management of the environment.

Constraints relating to the environmental agencies and institutions that specifically impact upon effective environmental management were identified as follows:

Lack of up-to-date policy framework

A draft National Conservation Strategy was developed in 1985 but not officially ratified. Although a National Plan for the Environment and Sustainable Development (NPESD 1991-2000) was adopted in 1990, there is no long term policy and strategy for environmental protection and conservation. Thus, the current environmental legislation exists with out an environmental policy framework.

Limited institutional capacity

NEA was founded in 1993 with 11 staff. By 1994 at the beginning of the project's first phase it had grown to 30, and to 45 at the end of phase one. It currently stands at 82 and continues to grow. Several new divisions have been created since its foundation and clearly defined mandates for some are still being crystallised. Many new members have relatively limited "hands-on" experience in environmental management and protection. These factors, coupled with Vietnam's rapidly expanding industrial and agricultural sectors, make strengthening NEA's capacity to meet its mandate a key issue.

Poorly defined mandates and weak institutional linkages

Ministerial Decision 545 that created NEA is clear with respect to NEA's role with regard to pollution control. However NEA's mandate does not include natural resources (land, water and forests) for which the MARD has responsibility. Never the less, NEA has been appointed (Decision 845/Ttg) as the key organisation in implementing the Biodiversity Action Plan. NEA has also been appointed the focal point for co-ordinating the Global Environmental Facility (GEF) in Vietnam. Strong linkages between NEA and other "green" institutions need to be developed.

The National Law on Environmental Protection (detailed under Article 5 of GD 175/CP) states that all ministries and other state organisations must co-operate with MoSTE in carrying out environmental protection within their sectors. In response ministries have established a department with responsibility for environmental affairs (usually a Department of Science and Technology). However these departments are poorly equipped and provide only an advisory and information role, and there are no formal links between MoSTE/NEA and these departments.

Poorly developed information management systems

NEA is a young and rapidly growing institution, whilst the pace of technological change in industry and agriculture is accelerating. The collective environmental management and protection experience and knowledge of NEA needs to be collated, codified and made available within NEA, and to the DoSTEs and other concerned ministries. Currently the information management system is limited to a collation of all national environmental legislation; a description of NEA, it's organisation and staff; and a directory of people involved in environmental management in Vietnam. NEA

and the DoSTEs are currently without access to environmental management and protection information available world wide on the Internet.

Lack of general awareness of environmental issues

It is generally recognised that there is a low level of environmental awareness in Vietnam and a need to develop this through all levels and facets of society. NEA has a pivotal role in raising the current levels of awareness and education.

Project Priorities

The SEMA project was designed to assist the Government of Vietnam to build the capacity necessary to tackle the above issues effectively. In particular, it identified the following priorities for assistance:

Help develop the structure of NEA: The NEA Director-General has indicated that a resident advisor is an important resource for the staff. The advisor will work directly with the Director-General, and help to develop the structure and organisation of NEA.

Develop comprehensive policy documents and guidelines. A strategic plan for NEA was, in principle, approved by the Ministry in July 1996. The project will help MoSTE to implement the recommendations of this plan. One of the objectives of the second phase of the project is to help strengthen the inter-divisional relations within NEA, and the links between NEA and its partners in the provinces and line ministries. A national, long-term strategy for conservation will be developed by MoSTE with assistance from the project. The project will also develop policy guidelines on environmental trade, green accounting and biodiversity conservation.

Enhance the relations between NEA and its partners: With assistance from the project, NEA is developing a national environmental information system, which will eventually comprise a network of users and co-operating agencies with applications for database, GIS and Internet access. This system will have two main functions. The first is to provide access to environmental information for provincial authorities, line ministries and co-operating institutions. This will include both Vietnamese information (through the NEA database) and international information (through UNEPNET). The second function is to enable NEA to collect data from provinces and co-operating institutions in order to prepare State of the Environment reports and annual environmental plans.

Develop an environmental inspection service: NEA has recognised that environmental inspection will rapidly become the key activity for the environmental authorities, both at provincial and national level. Already, each ministry and local authority has a department that is responsible for inspection. In MoSTE the Chief Inspector is responsible for the inspection of all activities related to Science, Technology and Environment and also oversees inspection activities at provincial level, which is the immediate responsibility of the provincial DoSTE. During 1996, it was agreed that the responsibility for environmental inspection should be handed

over to NEA, and a new Division for Environmental Inspection was created in NEA. The Environmental Inspector reports to both the MoSTE Chief Inspector and the NEA Director-General.

Environmental inspection at provincial level is the responsibility of DoSTE. Some of the larger provincial departments have separate divisions for inspection and environmental management. The Director of DoSTE is in all cases the first point of contact for MoSTE.

The SEMA project will therefore help NEA and DoSTE to clarify these roles and responsibilities. It will help to establish the procedures, guidelines and legal instructions for an effective environmental inspectorate, and provide the necessary training. It will directly assist the NEA Environmental Inspector, and work with a number of selected provincial authorities.

Build the human resources for environmental protection: Another requirement for a strong NEA is further training. The project will particularly help with strategic technical training. It is necessary to continue improving the English capability of the NEA staff, as this will enable them to read foreign publications, attend overseas meetings and participate in training by foreign specialists. Other training activities will focus on environmental inspection and management, information management, environmental legislation, policy and planning. Study tours will also be organised, particularly to learn about environmental inspection and environmental management in the Region.

Organisation

SEMA is a nationally executed project. The National Environment Agency of the Ministry of Science, Technology and Environment executes the project. The IUCN (World Conservation Union) has been engaged to provide technical assistance and management support to NEA. Similarly, the SEPA (Swedish Environment Protection Agency) provides short-term technical assistance in its areas of competence and also co-ordinates all expert inputs emanating from Sweden.

Within the NEA a Project Management Unit (PMU) has been established consisting of a National Project Director, who is a Deputy Director General in NEA, an NEA staff as Project Co-ordinator, an Accountant, a Training Co-ordinator, an Administrative Assistant and 2 Drivers. The international project staff, employed by IUCN, consists of a Chief/Senior Technical Advisor in the area of policy and institutional development, a Technical Advisor for the environmental inspection component and other short-term Technical Advisory inputs in different subject areas, as required.

Six of NEA's Divisions received the bulk of Project assistance. These Divisions are:

Policy & Legislation Division
Environmental Inspection Division

Nature Conservation Division
Database Management Division
Education & Training Division
Administration and International Division

These Divisions form the Project Co-ordination Unit. The Project develops its programme of activities with the Unit, and it is through the respective divisions that the activities are implemented. Since the start up of activities the Pollution Control Division and the Monitoring Division have also become involved in the SEMA Project's programme directly or in collaboration with the other divisions who have the main responsibility for the activities. The project also worked with the Publications Unit, which is an offshoot of the Education and Training Division and is responsible for publishing the monthly Environment Protection Journal (EPJ).

At the provincial level, SEMA worked with the Environmental Management and Inspection Divisions of the Departments of Science, Technology and Environment (DoSTEs) of six provinces, two in the North (Thai Nguyen and Ninh Binh), two in the Centre (Nghe An and Binh Dinh), and two in the South (Ba Ria-Vung Tau and Dong Thap).

Result Analysis in the Areas and Sub-Areas of Support

Under the four components or operational objectives and the four specific or immediate objectives identified in the project document, a total of 37 sub-objectives and 105 activities are listed in the logical framework matrix. For each of the activities the matrix lists outputs and indicators, together with the important assumptions that would determine the successful implementation of that particular activity. Subsequently, the Project Inception Report re-ordered the components and objectives into a ranked order of decreasing complexity, size and priority to present a more coherent picture of the Project.

In addition, some new activities were included on a yearly basis, during the course of implementing the APOs during the project period. This flexibility in carrying out small changes in the project during its implementation was agreed to in consultation with the project partners and Sida during the periodic meetings of partners and enabled the project to respond to the emerging needs of the agency and the sector.

Therefore, the report follows the sequence of various objectives and sub-objectives as set out in the Project Document and as re-ordered by the Inception Report and APO. Detailed information on achievements against individual activities has been reported in the annual progress reports for the years 1998, 1999 and 2000. This report will confine itself to analysing the results for their impact in achieving the project objectives and sub-objectives.

The analysis of final results has been undertaken with reference to the, objectives, sub-objectives, and activities. The performance against each of these is reviewed for its relevance, effectiveness and impact, particularly in terms of its contribution to achieving the project's four specific or immediate objectives and the two

development objectives. The indicators shown against each output in the logical framework form the primary basis for evaluating the achievements. The Management Information Learning System (MILS), and the APOs and Work Plans form the principal framework for monitoring the progress.

In addition, the analysis relies on the extensive documentation generated by the project, including annual and semi-annual reports, evaluation and assessment reports of activities, results of a questionnaire survey of the beneficiaries, as well as personal interviews with most of them. The recommendations of the PAG report of 1998 and the Organisational Study in 1999 are also used as reference points in evaluating the results. The assumptions set out in the logical framework have all held.

Operational Objective 1

An Environmental Policy and Improved Institutional Framework of the Environmental Institutions in SR Vietnam

The Sub-objectives under objective 1 are:

- An environmental policy and strategy for the next two decades
- An improved national institutional framework for environmental management and protection
- An improved environmental management capacity of six DoSTEs
- Environmental law promoted
- Projects for biodiversity conservation
- Improved relations with other Ministries
- Improved international relations in environmental management
- Government's capacity in environmental economics developed
- Government's capacity in dealing with issues concerning environment and international trade developed

1.1 Policy & strategy development

The lack of an up-to-date policy framework for environmental protection and management was one of the weaknesses that the project set out to address and it has succeeded in doing this in a very effective manner. The main achievements under this sub-objective are as follows:

- Development of the National Strategy for Environmental Protection (NSEP: 2001-2101) and the National Environmental Action Plan (NEAP: 2002-2005) by NEA has perhaps been one of the most important contributions of the project.
- The drafting of the NSEP and the NEAP was preceded by a thorough inter-sectoral review of the implementation of the National Plan on Environment and Sustainable Development (NPESD: 1991-2000) that identified the areas where the progress was unsatisfactory and recommended specific measures for strengthening the policy framework.

- The project supported the Policy & Legislation Division of NEA to prepare the environmental protection policy and strategy documents for 3 sectors: Energy, Fisheries and Tourism, in partnership with the relevant ministries.
- Consultations were also held to scope out issues relevant to the preparation of provincial level environmental protection policies and strategies for the Binh Dinh and Bac Giang Provinces.
- Training in environmental policy analysis, using the PoleStar Software was provided to NEA and other sector staff involved in policy and strategy development work with assistance from the Stockholm Environment Institute.

1.1.1 Relevance, effectiveness and impact

- The strategy and the action plan have been submitted to the government for approval. Significantly, the essence of the NSEP has already been appropriately incorporated into the 10-year Socio-economic Development Strategy of the government, thus, proving its immediate relevance to the national sustainable development agenda and establishing the crucial links with socio-economic planning.
- NEA's leaders ably guided the preparation of the NSEP and NEAP, both of which are cross-sectoral policy and planning documents and in doing so adopted unprecedented participatory planning approaches that involved in the process all sectors, provinces, institutions, NGOs and the international community. The process has undoubtedly enhanced the capacity of NEA's senior management in policy development and planning.
- The NSEP and NEAP were also presented and discussed at the annual conference of donors and government in December 2000, which contributed to defining the government's plans, long and medium-term programmes, as well as priorities for environmental protection and in clarifying the assistance needs from donors.
- Cross-sectoral discussions leading to preparation of the NSEP and NEAP have resulted in identifying and establishing practical and feasible implementation and oversight mechanisms, with institutional responsibilities as well as processes for integrating and harmonising environmental protection priorities within sector master plans.
- Environmental strategy documents for some sectors and provinces have enabled the integration of these concerns into their sector/provincial strategies and master plans.
- These results have contributed to achieving the specific/immediate objective 1 and 2 and development objective (a) and (b).

Constraints, external factors & recommendations

- Need for expeditious approval of the NSEP and NEAP by the GOV with clear directions to MPI, MoFinance and sectors to adopt recommended measures for effective implementation, including their integration within sector master plans and allocation of required funds from internal and external sources.
- There is need for developing more policy/strategy planning capacity at the provincial level, including institutionalising the process for integrating environmental concerns into local socio-economic development strategies and plans.
- Success of implementation will also depend on the response of donors in funding the identified priority programmes and activities.

1.2 Institutional strengthening

The project started when NEA was still a very new agency. It has provided critical support for improving the institutional framework in the NEA and at the DoSTEs. The major areas of support have been as follows:

- External review of the proposed institutional structure prepared by NEA for its upgradation as a General Department and discussions of the findings in a workshop that lead to specific recommendations for more rigorously defining the roles and functions of different departments and units, and more realistically assessing staffing needs.
- Clarified the roles and responsibilities of 3 NEA divisions - inspection, pollution control and EIA that were observed to have some overlapping jurisdictions and functions.
- The Policy & Legislation Division of NEA was supported in preparing a Strategic Human Resource Development and staffing plan for the proposed General Department.
- A study tour of 12 high level officials, led by the MoSTE Vice-Minister for Environment to Sweden and India in 2000, which yielded valuable lessons on development of environmental institutions in a developed and a developing country context.
- Institutional arrangement review of environmental management, inspection and control in the DoSTEs, as well as a detailed review of environmental management and inspection practices in the Ninh Binh and Binh Dinh DoSTEs.

1.2.1 Relevance, effectiveness and impact

- The study and review of the proposed organisational structure has helped greatly in refining the proposal prior to its finalisation and submission to government. The

proposal has reportedly passed several stages of assessment within the government system and awaits final approval at the highest level.

- Lessons learnt from the study tour of high level officials have also been fed into the decision making process of the Government of Vietnam and are expected to substantially influence the shape of the structure that would be finally approved.
- The development of a strategic HRD and staffing plan for the new organisation and recommendations for clarified roles and responsibilities of its functional units would have the NEA in readiness to make the necessary re-structuring and fill new staffing positions as soon as approval is accorded to the upgradation proposal.
- Similarly, the institutional arrangement review of DoSTEs has yielded valuable recommendations that have been used and would continue to be used in the development of environmental institutions at the provincial level, including capacity development of the staff.
- There is greater awareness and appreciation of the developmental needs of environmental organisations from central to the local levels among the senior policy and decision makers in government, and an enhanced capacity within NEA and MoSTE to prepare plans for institutional and organisational development.
- These results have contributed to achieving the specific/immediate objective 1 and 2 and development objective (a) and (b).

Constraints, external factors & recommendations

- The level of Institutional and organisational changes for the environment at the central and provincial levels will depend upon the nature and timing of the decision to be taken by the GOV and allocation of adequate resources for this purpose.
- Some of the functional changes, as recommended in the study of the three NEA divisions and the DoSTE institutional reviews could be implemented without any additional cost through administrative changes, thus, enhancing the efficient and effective functioning of these organisations.
- News about the impending upgradation of the environmental institutions has been current for a long time now and an early decision will greatly help in resolving this issue, building confidence in the donor community and targeting development inputs in a more co-ordinated and sustainable manner.

1.3 Management capacity

The improvement of management capacity within NEA and the DoSTEs is further discussed under objectives 2 and 3 below. However, specific areas of support under objective 1 have included development of policy guidelines on environmental law,

environmental trade, environmental economics and biodiversity conservation, as follows:

- Review of the environmental legislation resulting inter alia in proposals for amending the civil and criminal codes, and development of a project proposal for separate funding to implement the prioritised recommendations of the review. Report also prepared for quantifying and categorising environmental crimes according to their severity.
- Multi-stakeholder review of the implementation of the Biodiversity Action Plan (1995) and discussion of the findings in a workshop, which lead to the identification of priority issues and requirements for enhancing the implementation of BAP. A proposal was developed for revising the BAP as a follow up to this review. A team of relevant officials was also sent on a study tour to Australia to gain practical experience in effective implementation of BAP in that country.
- Development of a report on the information needs for a sub-national BAP for the high plateau region by the nature conservation division of NEA in consultation with the 4 provinces concerned, relevant institutions and organisations, and all stakeholders. The process included support for 4 provincial level consultations and 2 national workshops. The final output has been a project proposal to develop the BAP for the high plateau region.
- Ecological studies of 2 wetlands (Tram Chim and Thai Thuy in Dong Thap and Thai Binh Provinces respectively) of national and international importance by the nature conservation division, working with the provincial authorities and relevant institutions. This has resulted in the preparation of nomination documents for the listing of these wetlands as Ramsar sites under the relevant international convention.
- Exposure training in environmental economics, followed by a national workshop, a policy study on the use of economic instruments for pollution control, and a study tour to Sweden to learn from Swedish experiences. These activities explored the feasibility of using taxes, charges and incentives as measures for controlling pollution.
- Awareness raised on the need to harmonise trade expansion with environmental protection to ensure sustainable development of the country by organising an International Conference on Trade and Environment.
- Training of staff in English language skills to enable them to more effectively access international resources and training opportunities, including consulting English language documents and interacting directly with foreign specialists.
- Assessment of current status and needs of environmental education in the tertiary education system and lessons learned from study tour to Swedish institutions. This lead to development of curricula and teaching materials for 4

subjects: biodiversity conservation, environmental communications, general environmental engineering, and general environmental science.

1.3.1 Relevance, effectiveness and impact

- A new chapter 17 on environmental crimes was included through an amendment to the criminal code in December 1999. The report on quantification of criminal frames seeks to implement the new provisions.
- Priorities identified in the BAP review process for enhancing its effectiveness have been integrated into the NSEP and NEAP to ensure their implementation and allocation of resources.
- Nominations for Ramsar listing would increase the number of such sites in Vietnam and enable greater international support to wetland conservation.
- Project proposal for enhancing the effectiveness of BAP would help in obtaining funds from international sources for implementation of the priorities.
- Awareness about trade and environment issues has resulted in a growing use of these concepts by different sectors in Vietnam. It has resulted in a network of experts and improved dialogue between the government and private sector. It also paved the way for approval and implementation of the Trade, Environment & Development Project by UNCTAD in partnership with MoSTE and other relevant agencies. Assistance needs to the Ministry of Trade on Vietnam's accession to WTO have also been identified.
- As a follow up to this initiative supported by the project, NEA has started an examination of the environmental regulations of WTO and of the USA, as an important preparatory step for signing the bilateral trade agreement with that country.
- The initiative on environmental economics has generated greater awareness, clarified concepts and helped in identifying gaps and needs for further training. Proposals for using economic instruments for environmental protection have been initiated. For example, NEA has submitted to the Ministry of Finance a draft Decision of the Prime Minister on Collecting and Using Industrial Waste-Water Charge.
- Introduction of environmental education into the tertiary education system has started with the use of teaching materials on general environmental science and general environmental engineering in Hanoi University and National University of HCMC. Material on environmental communication is used in training courses for DoSTEs.
- These results have contributed to achieving the specific/immediate objective 2 and 3 and development objective (a) and (b).

Constraints, external factors & recommendations

- Institutional responsibilities for implementation of BAP continue to be weak, as NEA's mandate does not include natural resources for which the MARD has responsibility. However, NEA is the key organisation for implementing the Biodiversity Action Plan and stronger linkages between NEA and other institutions and agencies having direct management responsibility need to be developed.
- Ramsar nominations need to be endorsed by the respective provincial governments and submitted to GOV for approval and forwarded to the Ramsar secretariat, before these wetland sites can be designated.
- NEA will have to continue to play the role of a facilitator in promoting trade and environment issues and on the use of economic instruments for environmental protection by working closely with the relevant ministries and agencies like the Ministry of Trade and the Ministry of Finance.
- The project proposal on an environmental law support programme needs to be funded to implement recommendations of the law review.
- Work on green accounting, as provided for in the project document was not undertaken as it was felt to be premature given the state of development of environmental economics in the country.

1.4 Improved relations

The project assisted in strengthening links between NEA and its partners in the provinces and line ministries, as well as enhanced capacity of its senior management on international collaboration. Major achievements have been as follows:

- Established a national environmental information system, comprising a network of users and co-operating agencies with applications for database, GIS and Internet access. This result is further discussed under operational objective 3 below.
- Holding of workshops and conferences, some in direct partnership with other ministries like Ministry of Health (hospital waste management) and MARD (management of Agro-chemicals) that also involved the relevant sector and provincial representatives working closely with NEA on common issues of concern.
- Set up several inter-ministerial advisory groups to guide development of strategic documents like the NSEP, NEAP and National Report for Rio+10 Conference, enabling close collaboration between NEA and its partners. Representatives from 6 line ministries are also members of the project's steering committee.
- Supported the partnership conference on environment, thus, building closer relations between MoSTE/NEA and the donor community, and actively contributed to the annual donor and government conference in 2000.

- Developed proposal for an Environment Support Group of donors for the Environment (ESG) and finalised it in consultation with all stakeholders for submission to government.
- Contributed to the first ASEAN environmental conference, by organising a workshop on environmental damage and compensation assessment, thus building closer working relations with counterpart environmental organisations in the ASEAN region.

1.4.1 Relevance, effectiveness and impact

- The consultative process involving line ministries, sectors and provincial authorities has now become institutionalised and a regular feature of the environmental policy development and planning efforts.
- The involvement of line ministry representatives in various project activities like workshops and conferences and as experts and consultants has facilitated an easy and informal co-operation and strengthened mutual relations.
- In Dong Thap, based on information obtained from the SEMA workshop the problem of hospital waste was addressed effectively. A cost-effective design for waste treatment plant was studied and provincial hospitals asked to treat waste in this manner. The province has become a leader among all the provinces in the Mekong Delta in treating hospital waste.
- There is more openness in the relations between the agency and the donor community, leading to better understanding of positions and facilitating closer co-operation, needs identification, prioritisation and better co-ordination.
- The initiative taken by Vietnam in proposing and hosting the first ASEAN environmental forum was greatly appreciated by all the member countries and they have decided to make this into a regular event.
- These results have contributed to achieving the specific/immediate objective 1 and 2 and development objective (a) and (b).

Constraints, external factors & recommendations

- Need for strengthening of environmental departments/units in line ministries to facilitate more effective working relations.
- Need for greater collaboration and co-operation between NEA and MARD in the field of biodiversity conservation.
- Partnership conference on environment needs to be made into an annual event with regular review of progress.

- Approval of the ESG by government and establishment of its associated partnerships for regular collaboration and co-ordination of efforts.

Operational Objective 2

An Established Environmental Inspection Service

The sub-objectives under objective 2 are:

- An improved environmental inspection capacity in NEA's Inspection Division
- The six DoSTEs' Inspection Divisions fully trained in environmental inspection
- An established and operating mobile training laboratory with portable sampling and analytical equipment.
- NEA Inspection Division Staff fully trained in the effective use of the sampling and analytical equipment
- Six DoSTEs supplied with sampling and analytical equipment for environmental inspection and monitoring.
- DoSTE Inspection Division Staff fully trained in the effective use of the sampling and analytical equipment
- Provincial level Inspection staff exposed to developed concepts and other international solutions for environmental inspection.
- Chemical safety guidelines introduced
- Legal documents and guidelines on environmental inspection drafted
- An enhanced capacity for repair and calibration of laboratory equipment in three centres.

2.1 Technical assistance

The need to clarify roles and responsibilities for environmental inspection at the central and provincial levels and establish procedures, guidelines and legal instructions for an effective environmental inspectorate was an identified priority objective. Assistance was provided as follows:

- Institutional arrangement review of the DoSTEs with reference to environmental management and inspection functions (as reported under operational objective 1 above) included a detailed review of inspection practices in the Ninh Binh and Binh Dinh DoSTEs, with recommendations for enhancing effectiveness.
- 5-year strategic plan developed for an effective inspection service at NEA, after a detailed review of the activities and responsibilities of the environmental inspection division as well as a training needs assessment. The plan includes the mission, functions and activities, organisational structure including job descriptions, recruitment strategy, capacity building needs, operational procedures with central and provincial authorities etc.
- Production of a handbook for effective inspections that was widely discussed in draft form and field tested before final printing and distribution for use.

- Legal instruments related to environmental inspection reviewed and regulations drafted for improving inspection effectiveness through changes in the legislation. Suggested measures include strengthening the role of inspector, requiring self monitoring by the enterprises, and charging of environmental fee.
- National framework for environmental monitoring prepared and detailed monitoring programme developed for the Ba Ria-Vung Tau and Thai Nguyen Provinces; their implementation reviewed and measures suggested for more effective implementation.
- Existing practices reviewed and a strategy produced on chemical safety and control with recommendations for legal, administrative and institutional changes, as well as for training and awareness raising.

2.1.1 Relevance, effectiveness and impact

- The DoSTE institutional review has influenced organisational and functional changes for more effective working and the recommended changes have also been built into the proposal for the new institutional arrangement that is pending government approval.
- Inspection division uses the strategic plan not only for developing its annual plan but also for issuing guidelines for DoSTE inspection plan development to ensure their conformity with the common strategic plan.
- MoSTE, all DoSTEs, inspectorate of line Ministries, and some environmental consulting firms and enterprises are using the inspection handbook and it has been rated as a very useful and relevant reference tool for their inspection duties.
- Environmental monitoring programmes prepared for 2 DoSTEs have wider relevance and application to the other DoSTEs and the national system.
- Strategy on chemical safety and control represents a joint effort by the pollution control and inspection divisions of NEA. It is very relevant in view of increasing chemical hazards to human health and the environment due to industrialisation and intensive agricultural practices. Implementation of the strategy will have a positive impact on Vietnam's participation and competitiveness in the global trade in goods and products.
- These results have contributed to achieving the specific/immediate objective 2, 3 and 4 and development objective (a) and (b).

Constraints, external factors & recommendations

- Institutional restructuring will be a slow and gradual process and is also linked to the decision on upgradation of the environmental organisations at the central and local levels.

- The numbers of inspectors at the Central and Provincial levels will have to be increased substantially if they are to be effective.
- Recommended regulations for improving inspections are proposed to be issued as a decree only after a decision is made on the proposed upgradation of NEA.
- The strategy on chemical safety and control needs to be implemented.

2.2 Training and equipment

Provision of training and equipment to the inspection staff at NEA and at the DoSTEs was seen as one of the most important means of building capacity. The following results were achieved:

- Over 100 inspectors from NEA, DoSTEs and line ministries trained through a series of 5 modules of inspection training, comprising a total of 17 one-week courses and 41 themes covering subjects like environmental systems, management, technology, inspection, economics, information management etc. Each module was jointly designed and imparted by Swedish and Vietnamese experts from the Swedish university system, from a Vietnamese local training institution and NEA/MoSTE.
- 35 inspectors from MoSTE, NEA and the DoSTEs exposed to international concepts and practices through participation in overseas training courses (1 in Sweden and 2 in Thailand), study tours (1 in Sweden and 1 in South Korea), and conferences (1 in USA).
- Needs assessment conducted and standard set of laboratory/mobile sampling and analytical equipment (30 nos.) and audio-visual equipment (4 nos.) supplied to each of the 6 project DoSTEs and to the inspection division in NEA followed by 3 training courses to train inspectors in the use of this equipment.
- Field vehicle procured and established and used as a mobile laboratory by NEA.

2.2.1 Relevance, effectiveness and impact

- Training has improved the depth and nature of inspections. Prior to 1997 mainly administrative compliance was inspected to check availability of EIA approval and compliance with its regulations. After training, complicated cases are being dealt with and inspectors check for technical compliance, collect and analyse samples, assess environmental damage etc. The professional ability of inspectors has improved.
- For example, in Ba Ria-Vung Tau province the 2000 plan on inspections was exceeded and an award has been proposed. In all, 80 enterprises were inspected, which is a 23% increase over the plan. The complaints of the people were also dealt with more effectively.

- All training and reference materials used for each of the 5 modules have been compiled, thus, providing resources for training of additional staff with assistance from the local training institution.
- With the training of staff from line ministries like MARD, industry, health, public security, defence, justice, trade, customs, land administration and tourism the co-operation and co-ordination between them and the inspection service was established and improved. This co-operation was considered by MoSTE's steering committee as one of the main reasons for the success of the National Survey on Environmental Compliance, 2000.
- Overseas experience has contributed in the process of developing an effective inspection service, training, inspection database, chemical safety and control practices, and conducting complicated inspections.
- Provision of equipment for field sampling has enabled NEA and the DoSTEs to be more proactive in dealing with environmental complaints and determining potential pollution sources and providing a scientific basis for their work. It has also supported environmental management and monitoring work, and helped to prepare rational strategies for environmental protection at the provincial level.
- Based on the support from the project by way of equipment and the provincial monitoring plan the People's Committee of Ba Ria-Vung Tau has approved the proposal to construct an environmental monitoring station at a cost of nearly US \$ 1,30,000, which would be put into operation by the end of 2001.
- The awareness of business enterprises of the LEP has been enhanced, which has resulted in a progressive decrease in the number environmental violations by enterprises since 1998. In Binh Dinh the number of enterprises violating the law has come down from 268 in 1998 to 22 in 2000, while in Dong Thap it has come down from 40 in 1999 to only 3 in 2000.
- The mobile laboratory has enabled NEA to conduct 10 inspections during 2000.
- These results have contributed to achieving the specific/immediate objective 2, 3 and 4 and development objective (a) and (b).

Constraints, external factors & recommendations

- The basic foundation of inspection training needs to be built upon with more specific and targeted training to provide in-depth inspection skills, training on environmental technology, for measuring environmental indicators and on other specialised subjects.
- Not all trainees participated in sequential training from modules 1 to 5 as planned, resulting in new trainees entering the courses at different stages thus, compromising the value of the training. However, it is possible that some felt that

they had the required knowledge of the basic concepts and participated only in the latter courses.

- Equipment originally planned to be procured in 1998 could be finally procured and supplied only in mid-2000 because of several administrative constraints. This has in turn impacted upon the timely training of staff and use of equipment during the project period.
- Capacity development at 3 centres for repair and calibration of laboratory equipment was not taken up as staff was provided training in their maintenance and it was decided to continue to rely on the available technical service centres for more advanced analytical services.

Operational Objective 3

An Effective System for the Management & Dissemination of Information about Environmental Protection

The sub-objectives under objective 3 are:

- An effective NEA's Environmental Database
- Effective DoSTE Environmental Databases and Geographic Information Systems
- A competence in information management in NEA and the six DoSTEs
- NEA's Local Area Network expanded to all Divisions
- Environmental Information Network linked to concerned Ministries
- An operating English self-access centre
- A Green Guide for Vietnam.

3.1 Environmental information databases

The project addressed the need to make available the collective environmental management and protection experience and knowledge within NEA, to the DoSTEs and other concerned ministries and achieved the following results:

- Six environmental information databases developed on NEA's Website: on industrial environment (10 industry categories), hazardous chemicals (150 chemicals), legislation and regulations (800 laws & regulations), biophysical & socio-economics (16 topics and 213 indicators), environmental specialists (500 Vietnamese environmentalists), and environment protection journal (all issues).
- Developed and established a national environmental GIS database standard in consultation with all stakeholders. This was subsequently reviewed and its design further improved.
- GIS databases developed for 6 DoSTEs based on the national standard covering over 20 layers of information on natural features and environmental parameters. Additional powerful GIS application software was procured and supplied to the DoSTEs and their staff trained on GIS application in environmental management.

- A handbook on application of GIS for environmental management developed containing comprehensive training materials.

3.1.1 Relevance, effectiveness and impact

- Environmental databases available to NEA LAN users as well as to remote users through Internet. Information finds application in various aspects of environmental management and protection activities and in planning and EIA work. Data sheets of good quality are available and the data is being used.
- Through the development of a common GIS database standard on environment NEA has successfully established a common technical policy on one of its thematic areas. This has facilitated the process of information sharing among line ministries, branches, institutions and provinces.
- GIS databases have facilitated DoSTEs in building their own environmental information system based on GIS technology.
- The Ba Ria-Vung Tau province has applied the GIS capability in preparing a master plan for waste management up to 2010 with a focus on wastewater and solid waste.
- Handbook used as a technical manual by GIS practitioners and as a training material at provincial level.
- These results have contributed to achieving the specific/immediate objective 2 and 3 and development objective (a) and (b).

Constraints, external factors & recommendations

- All databases, including GIS databases need to be constantly updated for which dedicated human and financial resources must be made available.

3.2 Environmental information network

NEA and DoSTEs were without access to environmental management and protection information that was available world wide and on the Internet. The project provided this access and achieved the following results:

- The database management division of NEA was equipped with IT equipment to expand NEA's LAN. Computers and peripherals were installed in 2 NEA divisions and all divisions networked to access the information on the main server in MoSTE building.
- Needs assessment surveys followed the procurement of additional software for the 6 project DoSTEs and 6 PCs for the departments responsible for environmental management in 5 line ministries - ministries of health, industry,

MARD, MPI, and office of government, as well as in MoSTE. This enabled all of them to have access to NEA's server and the Internet.

- Training imparted to about 150 staff from NEA, DoSTEs and line ministries through 6 different courses on using LAN, Intranet, Internet, NEA's databases, and on information searching, sharing and management.
- A dynamic GIS Website designed and installed on NEA's Website to enable the public to get access to NEA's GIS information through the Internet.
- Electronic version of SEMA management information and learning system (MILS) designed and integrated into NEA's LAN for enhanced information sharing, and training in its use imparted to the NEA and DoSTE staff.

3.2.1 Relevance, effectiveness and impact

- Hardware, software, networking and training support provided to NEA, DoSTEs and the line ministries has proved invaluable to the staff and greatly facilitated them in their work. There is increased frequency of information sharing and network contact amongst them.
- Based on the good results achieved, the government has allocated 7 billion VND to NEA for procurement of equipment to upgrade the environmental information network by the Database Division.
- MILS on LAN has facilitated more effective communication and dissemination of project information within the agency.
- These results have contributed to achieving the specific/immediate objective 2 and 3 and development objective (a) and (b).

Constraints, external factors & recommendations

- Network efficiency is limited by the capacity of equipment. As technology advances and faster and more efficient systems become available, it would be necessary for the NEA and the DoSTEs to upgrade their systems.
- There is need for increasing the computer network to enhance the effectiveness and level of information exchange between all DoSTEs and NEA/MoSTE.
- While information resources and means to access them can be made available their actual use depends on the motivation and interest of the users.

3.3 Environmental information management

Development of competence in information management was achieved by making an analysis of training needs, designing and conducting training and exposure programmes, and making available necessary facilities and resources as follows:

- Two courses conducted for 46 participants from NEA, DoSTEs and line ministries at Hanoi and HCMC with the help of the World Conservation Monitoring Centre (WCMC) UK, covering basic training on information needs assessment, information management, and accessing environmental information on the Internet.
- A three-member team from NEA sent on a 10 day study tour to UK to visit the WCMC and seven other environment information and data base management systems specialising in biodiversity information development and management.
- A two week study tour undertaken by 5 officials from NEA and MoSTE to Sweden to study environmental information system development and management practices at the Swedish Environment Protection Agency (SEPA) and the Chemical Inspectorate (KemI).
- Workshop conducted on the application of remote sensing technology for environmental management in Vietnam.

3.3.1 Relevance, effectiveness and impact

- Training has improved the knowledge and skills of the staff in the use of information management for environmental management.
- Study tour to UK resulted in the development of a proposal for establishing a national biodiversity information network (ViBINEt) and a Website on Vietnam's biodiversity.
- Lessons learnt from study tour to Sweden were applied in the development of the databases on industrial environment and hazardous chemicals databases.
- NEA was able to formulate its policies and plans for application of remote sensing technology in environmental activities.
- These results have contributed to achieving the specific/immediate objective 2 and 3 and development objective (a) and (b).

Constraints, external factors & recommendations

- The ViBINEt and biodiversity Website proposal has not yet successfully attracted donor interest and remains unimplemented.
- The English self-access centre was not developed, as learning in a classroom situation was found to be more effective for which excellent facilities exist within Hanoi and are being used regularly.

Operational Objective 4

Increased Environmental Awareness

The sub-objectives under objective 4 are:

- A public awareness campaign developed
- An increased environmental awareness of decision makers
- Foreign language environmental texts translated into Vietnamese
- A knowledge of other countries experience in raising environmental awareness
- Small scale environmentally related projects undertaken
- An enhanced NEA's Newsletter
- DoSTEs assisted with World Environment Day Celebrations
- An improved VACNE Magazine
- Environmental associations assisted

4.1 Environmental awareness

The results achieved by the project in helping NEA's education and training division to raise the levels of awareness and education in the Vietnamese society have been as follows:

- Discussion paper on public environmental awareness strategy produced, based on which a pilot proposal was developed and implemented for a comprehensive public awareness campaign in the Dong Thap Province.
- Weekend seminar for decision makers organised with the Vietnam Association of Nature and Environment (VACNE), including Swedish experts and targeting ministers and vice-ministers from line ministries, chairman and vice-chairman from provincial peoples' committees, and directors of DoSTEs.
- DoSTEs assisted with the observance of the World Environment Day (WED) and the Clean up the World Day (CWD) annually.
- NEA Newsletter/Bulletin upgraded to a monthly Environment Protection Journal (EPJ) and the publications unit of NEA provided with desk top publishing equipment, software and specialised training.
- Small-scale environmental awareness activities implemented in all 6-project provinces through voluntary associations and mass movements. Activities included preparing black lists of polluting industries (Thai Nguyen, Ba Ria-Vung Tau), demonstration projects on solid waste management (Ninh Binh, Nghe An), tree planting and ecological garden activities (Nghe An), improving hygiene and health conditions in rural areas (Binh Dinh), and construction of a water purification and supply system (Dong Thap).

- A dozen foreign language environmental texts translated into Vietnamese and distributed to DoSTEs, line ministries, universities, libraries, institutions, NGOs and other partners.
- Assistance was provided to environmental associations by way of distributing all relevant publications and materials. Special workshop held on environmental issues for journalists and other mass media presenters. Workshop held on the concept and practice of eco-villages with the institute of ecological economy. Workshop on human environment also held.

4.1.1 Relevance, effectiveness and impact

1. Provincial public awareness campaign in Dong Thap was successful in raising awareness among the local cadres and enterprises. One component of the campaign was directed at school teachers, enabling them in turn, to develop their own teaching plans and materials for the students. The provincial government has extended this experience to more areas in the province. The education department is considering introducing environment education in the teaching curricula.
 - Decision-makers exposed to relevant concepts like maintenance of environmental standards, developing and implementing environmental management systems at factory level, and role of corporate sector in pollution control, thus, sensitising them to consider environmental implications of developmental programmes. The growing reflection of environmental concerns in state strategies, policies and plans is one of the indicators.
 - Support for organisation of WED and CWD campaigns enabled these events to be held at a much larger scale, as well as production and dissemination of educational and awareness materials up to the District and Commune levels. The events were extensively covered in the provincial television, radio and print media, as evidenced by news reports, generating widespread awareness and consciousness.
 - Support for the EPJ enabled professional and high quality production of the journal and production and distribution of increased number of copies (1000 out of a total of 3000) of each issue every month.
 - Implementation of small-scale projects and the associated training and awareness raising components of all these activities has generated considerable interest and enthusiasm among the voluntary associations and the public in the provinces to continue similar activities in future as well. These activities have been rated by the DoSTEs as being socially significant and very relevant.
 - Small-scale projects have mobilised support of various sectors in implementation, gained support of provincial leadership, served as pilots for implementation of additional models with local funding, and have been greatly appreciated and valued by the local people.

- For example, the Ministry of Construction has appreciated the water supply scheme in Phung Thinh Commune of Dong Thap and is considering extending such schemes for other provinces in the Mekong Delta. This pilot effort from SEMA has prompted the local government to plan a mobile water treatment plant to be placed on a barge to cover a larger population along the banks of the Mekong River that would be operational in a few months' time.
- In Ninh Binh, implementation of the small-scale project on solid waste management has resulted in the Province issuing regulations in 2000 on environmental protection and maintaining a clean and healthy environment.
- Workshops on specific topics and publication and distribution of publicity materials have all contributed to the cause of raising public awareness for environmental protection and management.
- These results have contributed to achieving the specific/immediate objective 2 and 3 and development objective (a) and (b).

Constraints, external factors & recommendations

- Publication of the VACNE's Green Vietnam magazine was discontinued and hence, no assistance was provided.
- Overseas study tour to Indonesia was not undertaken to learn from that country's experience of raising environmental awareness.
- Project proposal for raising awareness in central government ministries was not developed as several joint activities, including workshops have been held with them, which have been effective in fully involving them in and creating awareness on a range of environmental issues.
- Project beneficiaries have recommended that the project should focus more on environmental awareness activities in future.

Assessment of capacity building

All objectives of the project have sought to build capacity for better environmental protection and management and a variety of means was adopted for this purpose. These included training in Vietnam and abroad, study tours, participation in conferences and workshops within and outside Vietnam, development of policy guidelines and other strategic documents, working with international and national experts and consultants, provision of equipment and facilities and the associated training in their use.

Training in Vietnam

A total of 31 training courses were organised to help improve the technical competence of the staff in the NEA, DoSTEs and line ministries. The major areas of training covered were environmental inspection, environmental economics, information management, policy planning, species threat assessment, English language etc. In all some 692 people participated in these training programmes, which included 184 women and 508 men participants.

In addition, 20 workshops, seminars and conferences were organised that covered a total of 1,127 participants, including 305 women and 922 men. These covered subjects in the areas of policy, inspection, information management and awareness. Some of these workshops were designed as training workshops, while the others served to discuss specific issues, seek consensus, exchange information, and create awareness.

Training within the country was mostly imparted with the help of short-term international experts and consultants and often using local counterpart training institutions. This enabled a larger number of staff to be trained and also helped to develop local training capacity and materials for future use. The training covered not only the NEA and 6 DoSTE staff but also inspection and environmental management staff belonging to the other DoSTEs, representatives of line ministries and from other centres and institutions as well.

All training courses have been assessed by the participants as being very relevant, informative and useful in enhancing their knowledge and skills in different fields of environmental protection and management. They have recommended that such training programmes should continue, be of longer duration, involve visits to relevant local pilot sites, and make more use of local experts.

Details of in-country training are given in Annex II.

Training abroad

The project supported the training of 30 people abroad in the areas of environmental inspection, planning & management of industrial estates, environmental management, and English. These included 12 women and 18 men representing NEA, DoSTEs and line ministries. The training took place in Sweden, Thailand, UK, and Singapore.

In addition, 71 persons were sent on study tour abroad to Sweden, Switzerland, Australia, India, and South Korea to learn about environmental inspection, cleaner production and chemical safety, environmental education training systems, use of economic instruments, information management, biodiversity conservation, and environmental institutional development. These included 14 women and 57 men representing NEA, DoSTEs and line ministries.

13 persons were also supported to attend international conferences and workshops dealing with subjects such as environmental compliance and enforcement, environment and trade, biodiversity conservation, and to attend the Conference of

Parties on the Convention on Biological Diversity (CBD), and the Regional and World Conservation Congresses.

Capacity development through training, study tours and attending conferences and workshops abroad has made an important contribution to broadening the vision of the staff concerned, exposing them to the latest international concepts, technologies and resources. Such exposure has contributed to their professional development, enhanced their skills and level of technical knowledge, which is reflected in their increased efficiency and effectiveness at work.

The participants valued these overseas learning experiences greatly and recommend the need to continue such periodic exposure to latest technologies, concepts and best practice. The staff mention that they feel more confident in submitting proposals and ideas to the higher levels now. Although some of the experiences (from Sweden) may not be currently very relevant in Vietnam, considering its contrasting situation to that of a highly developed country, they do draw attention to the potential possibilities. It has also been observed that there is a need to make the selection process of participants for such overseas trips more objective and transparent.

Details of overseas training, study tours, attendance in conferences and workshops are given in Annex III & IV.

Utilisation of advisors and experts

The project had provision for one environmental policy and institutional expert as a long-term advisor (CTA) for the duration of the project and another expert in waste management and pollution control as a technical advisor (TA) for two years. Because of delays in the contractual process placement of the two long-term advisors was delayed considerably. The CTA left the project after 15 months and was replaced by a STA. The TA left the project after two years (effective duration 21 months) and with the prolongation into the consolidation phase, only the STA was in position for the remaining one and a half years of the project.

The summaries of main tasks undertaken and percentage of time spent on each by the STA has been as follows: preparing project work plans, budgets, progress reports (20%); drafting proposals and ToRs for activities (20%); technical guidance for implementation of activities (20%); co-ordination of activities and overall project management (20%); development of policies, strategies and action plans (10%); assessment and evaluation of proposals/reports and other M&E activities (10%).

The TA has assessed that 50% of his time was spent on technical assistance and the rest on administrative functions. In addition, 52 short-term international experts were used for different activities and these were recruited through the IUCN (23 experts) and the SEPA (29 experts).

International experts and advisors working together with the NEA and DoSTE staff and with local counterpart experts has proved to be an effective strategy for building local capacity in the various subject areas. Such interaction has also fostered lasting professional relationships that go beyond the activity implementation period. The individuals concerned, in most cases, have continued to maintain contact and exchange views and information for mutual benefit.

The project beneficiaries have rated the inputs provided by these experts as generally satisfactory. However, it was recommended that preferably persons with previous experience of working in Vietnam or other developing countries should be selected. It was also recommended that the long-term advisors should be relatively stable positions and enabled to provide more time to technical issues.

In addition, 152 local experts belonging to Vietnamese organisations, universities, line ministries and DoSTEs were contracted to work with the relevant NEA Divisions. Often, the local experts worked as counterparts to the foreign experts and this has resulted in knowledge and competence development not only in NEA but also with a spin-off benefit to those organisations to which these local experts belonged.

The subject areas covered by the local and foreign experts and the duration of their inputs is detailed in Annex VI & VII respectively.

Equipment

The project procured and supplied office, computer, networking, inspection and audio-visual equipment and two vehicles. While all other equipment was procured and put to use in a timely and effective manner, there was inordinate delay in the procurement of the inspection equipment. Originally intended for procurement in 1998, the equipment could be finally procured and put to use only by mid-2000.

Delay in procurement was initially caused on account of disagreement on the list of equipment and later due to the time taken to finalise procurement procedures to the satisfaction of Sida and NEA/MoSTE. This being the first exercise of its kind, NEA had to reconcile GOV procedures in accordance with the standard World Bank norms that would be acceptable to Sida. The consolidation phase enabled completion of equipment use and maintenance training activities by September 2000 and use of the equipment for nearly a year during the project period. With procurement procedure well established and relevant experience gained, NEA should avoid the delays of the past in any future procurement exercise.

All equipment has proved immensely useful, but there is a demand for procuring additional computers (with GIS and Internet capability) and laboratory equipment (list provided to NEA) for the DoSTEs to make their functioning more efficient and effective. The PAG established by Sida in 1998 observed that it may not be a useful strategy for the DoSTEs to develop air quality and other complex analytical capability and that they should rather avail of the services offered by central laboratories for this purpose. However, in practice this is not a very practical suggestion and the

provincial environmental authorities will have to develop some in house capacity in this regard and be able to offer such services to other departments also.

The complete list of equipment and other assets procured and supplied under the project is at Annex V.

Capacity strengthening is very difficult to assess, especially in a situation where there is no institutionalised system for performance appraisal within NEA and the DoSTEs. Moreover, as it is a gradual process it takes time for the results to become apparent. Nevertheless, other quantitative and qualitative indicators have been used in this review to assess improvements in the institution's ability to achieve its goals and objectives. At the same time, it must be borne in mind that the quality of environmental management as a whole within the country has been influenced not only by SEMA but also through other bilateral and multilateral aid projects, both at the Centre and in the provinces.

The professional knowledge and competence of the environmental staff has been undoubtedly improved discernibly and the government now relies on NEA as the focal point for solutions to environmental problems, as opposed to approaching individual centres and institutions previously. This is reflected not only by the greater degree of confidence reposed in the organisation but also by the greater degree of confidence and ability with which the individuals within the organisation handle their responsibilities, as well as in the quality of their work output. The government has also stepped up its budgetary support to NEA from 20 billion VND in 1997 to 48 billion VND in 2000, which was doubled to 100 billion VND in 2001, including for support activities to the provinces and line ministries.

Gender balance

Gender concerns were taken into cognisance in the various training programmes and other project activities to ensure that at least the existing patterns of the beneficiary organisations were well reflected. Gender considerations also came into play in the award of contracts for various studies and consultancies. Some activities like the small-scale projects on awareness generation were awarded exclusively to the Union of Women. Gender related information also formed important contextual information in the development of the NSEP and the NEAP.

Organisation and management

This was the first major project to be nationally executed by NEA. Consequently, a lot of time was taken up initially for establishing proper working procedures and protocols, which was to be expected. This initial delay was responsible for the slow pace of project implementation in 1997 and 1998. The delay in negotiating and concluding the contract with IUCN for consulting services caused delay in the recruitment and placement of the long-term advisors, which in turn, delayed project planning and implementation.

The integration of SEMA within NEA has often been commented upon and the Organisational Study of 1999 observed that it was insufficiently integrated within the NEA divisions. The situation has been carefully analysed and it is revealed that such impressions and assessments are based on an incomplete appreciation and understanding of the functioning of SEMA within NEA.

The project activities are all part of NEA's mandate and priorities and are included within NEA's annual work programme. Each division concerned plans and implements the activities that relate to their divisions with guidance and support from the PMU. The progress of implementing SEMA activities is reviewed as part of NEA's weekly review of its work and relevant information is also shared among all units.

The existence of separate accounting and procurement procedures from NEA has also been mentioned as displaying lack of integration. This is inevitable, given the fact that government procedures are different from those that may be acceptable to Sida. However, the project accountant reports the accounts to the NEA accountant on a half-yearly basis, as required by government regulations and procurement of inspection equipment was done by the Administration Division of NEA.

It is noteworthy that while responding to the project review questionnaire all NEA divisions and the six project DoSTEs have specifically recommended that the responsibility for management should not be assigned to any particular division within NEA and that it should continue to be managed by the PMU.

The shortage of staff within NEA is also said to have limited the capacity building effort as more and more demands are being made on limited number of staff to implement various activities. The original proposed staff strength for NEA was about 150, against which they currently have 61 and some contract staff. Not only does NEA have its own annual work programme, but it has to implement activities under several projects¹ as well. However, as mentioned earlier, the various project activities are planned in advance and in concert with the planning of NEA's annual work programme. Nevertheless, care needs to be taken to ensure that the various project activities are mutually exclusive and do not make additional demands on limited staff time.

IUCN had the responsibility for providing overall technical assistance to the project. In addition to providing the two long-term advisors, it was responsible for short-term experts, planning, financial management, training, monitoring and procurement activities. The organisation has effectively used its experience and its regional and global networks in discharging its responsibilities of providing the most appropriate technical support and services to the project.

¹ Currently, in addition to SEMA, there is the VCEP II project of CIDA, the ICZM project funded by the Dutch, the World Bank project on Strengthening Institutional Capacity for Environmental Information Management, and a Spanish project on Biodiversity Conservation Awareness with IUCN.

SEPA was mainly responsible for co-ordinating all Swedish inputs, including providing short-term experts in specified areas, training and institutional arrangements for inspection, and study tours in Sweden. It has provided very valuable support to NEA and the DoSTEs, particularly in the development of the inspection service.

Having had no previous experience of providing such consulting services in the developing world and not having any presence in Vietnam, SEPA initially found it difficult to discharge its responsibilities effectively. Frequent changes (four times in four years) in the position of Project Manager made the task even more difficult as each new incumbent required time to become familiar with the project. However, after several rounds of meeting contacts it was possible to establish a stable working relationship between NEA and SEPA.

Invoicing of costs by SEPA for its inputs, however, continued to be a problem despite best efforts to streamline the process. Apart from delays in invoicing, the invoices did not contain sufficient supporting details in English for NEA to verify and confirm the costs, which led to further delays in charging costs during the relevant year. The procedure was considerably streamlined towards the last year of the project after considerable correspondence and discussions.

In view of the complementarity of functions between SEPA and NEA there is a need to foster a "twinning" arrangement between the two organisations. Such a relationship must go beyond the implementation of project activities and lead to regular interactions in developing policies and programmes. An example of such a relationship has been the signing of an agreement for co-operation in training between Umea University and the Centre for Environmental Engineering for Towns & Industrial Areas (CEETIA) under the University of Construction in Hanoi. These two institutions worked together in imparting the five inspection training modules and decided to further their collaboration.

Budget Cost Efficiency & Effectiveness

[All figures are currently up to Dec 2000 only]

The year-wise financial performance of the project is shown below. The details are given in Annex I.

Budget for the co-operation	33 million SEK	% Total Budget
Expenditure in 1997	271,070 SEK	0.82
Expenditure in 1998	6,638,700 SEK	20.11
Expenditure in 1999	8,427,190 SEK	25.53
Expenditure in 2000	11,030,580 SEK	33.42
Estimated expenditure in 2001	3,183,294 SEK	9.64
Sida follow up costs	1,500,000 SEK	4.54
Total	31,050,834 SEK	94.09

It can be seen from these figures that:

- The rate of utilisation of funds has been very good (Figure 1).
- There is a steady increase in the rate of utilisation of funds, after the initial teething troubles had been sorted out (Figure 2).
- The figures for 1997 and 2001 represent expenditure only for 6 months each.
- The almost complete utilisation of project funds was made possible by the extension of the project by one year, beyond June 2000 through the consolidation phase.

The expenditure against the major components of the budget is as follows:

Component	Expenditure	% Total Budget
Policy & Institutional Matters	7,191,850 SEK	27.79
Environmental Inspection + TA	6,954,670 SEK	21.07
Information management	2,693,240 SEK	8.16
Environmental Awareness	1,451,810 SEK	4.39
Contingencies	114,030 SEK	0.34
Office Operations +CTA	5,985,820 SEK	18.13
Planning, Monitoring & Evaluation	216,250 SEK	0.65
IUCN Back up & Overhead Costs	1,619,990 SEK	4.90
SEPA Local Office Support	139,870 SEK	0.42
Total	26,367,530 SEK	85.85

The above figures reveal that:

- The priority established for the different components in the inception report has been maintained, as is evident from the relative levels of expenditure (Figure 3).
- The slightly higher level of expenditure against the policy and institutional matters component was due to the additional responsibility that was assigned for finalising the national environmental protection strategy and the national environmental action plan through an extensive public consultation process.

The expenditure towards the major forms of capacity building activities is as follows:

Activity	Expenditure	% Total Budget
In-country training, workshops & conferences	4,580,402 SEK	14.0
Overseas training, study tours, conferences & workshops	2,673,255 SEK	8.0
International long-term advisors	6,055,846 SEK	18.0
International short-term advisors	1,988,085 SEK	0.6
Procurement of equipment	2,825,504 SEK	0.9
Total	22,654,374 SEK	41.5

In terms of cost-effectiveness the following points are noteworthy:

- An important assumption in considering the cost effectiveness of capacity building activities like training and study tours is that the right candidates were selected and trained.
- All activities were implemented in accordance with established cost-norms and with minimal and only the most appropriate inputs.
- The results of each objective, as analysed in the previous sections, are wholly consistent with the total expenditure incurred.
- The use of international long-term advisors for more technical and less administrative work would have made these positions more cost effective.
- Timely procurement of inspection equipment would have ensured their use over a longer time period during the currency of the project, thus enabling a proper assessment of cost effectiveness.

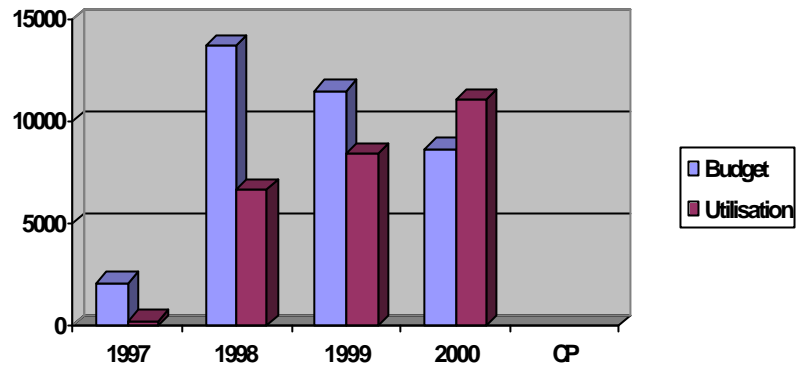
The expenditure by partners is as follows:

Partner	1997 - 2001 Expenditure	% Total Budget
NEA	18,136,244 SEK	55%
IUCN	9,786,610 SEK	30%
SEPA	3,523,210 SEK	11%
Total	31,446,063 SEK	96%

This above statement reveals that:

- IUCN has remained within the limits of its contract value.
- The payment of fees of long-term advisors by IUCN has not exceeded 3,915, 000 SEK as provided for in the contract for consulting services **(to be checked)**.

Figure 1: Year-wise budget and utilisation (value in 000 SEK)



Note: Utilisation exceeds budget in 2000 as it also includes expenditure of 1999 that was charged in 2000

Figure 2: Progressive total of budget and utilisation (value in 000 SEK)

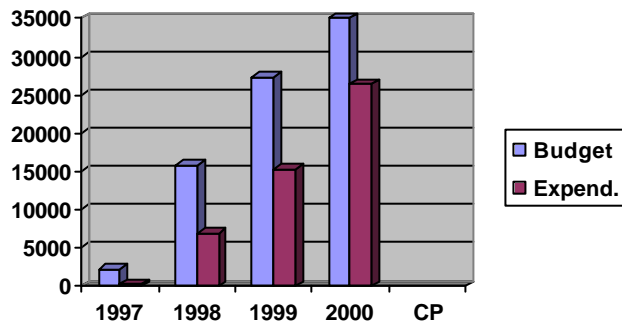
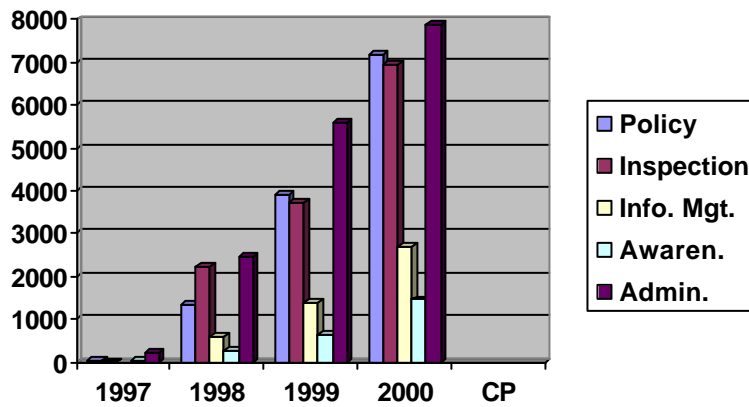


Figure 3: Component-wise progressive expenditure (value in 000 SEK)



Conclusions and Directions for Future

Conclusions

The project sought to overcome the following main constraints of the environmental agencies and institutions:

Lack of up-to-date policy framework; Limited institutional capacity; Poorly defined mandates and weak institutional linkages; Poorly defined information management systems; and Lack of general awareness of environmental issues.

It attempted to do this by:

Helping NEA to develop its institutional structure; Developing comprehensive policy documents and guidelines; Enhancing relations between NEA and its partners; Developing an environmental inspection service; and Building the human resources for environmental protection.

The analysis of results has clearly demonstrated that the project has been successful in achieving the stated priorities. In summary, the following conclusions can be drawn:

- The institutional structure of NEA has been further developed, with clarified roles and responsibilities of various divisions and a proposal has been prepared for the changes that are likely to take place in the near future. Similar institutional reviews with recommendations have been undertaken for the inspection and management divisions of the DoSTEs.
- Long-term (up to 2010) environmental strategy and medium-term (up to 2005) action plan have been prepared and submitted for government approval. Their integration with the national socio-economic development plan and the sector plans has already begun. Policy guidelines have been established for chemical safety, biodiversity conservation, trade and environment, economic instruments, strengthening environmental law etc. The capacity of the senior management of NEA in policy development was amply demonstrated through its able leadership in developing these strategic documents.
- Inter-sectoral consultation has been greatly enhanced through a variety of means. The linking of the departments responsible for environment in six line ministries with NEA has enabled regular information sharing and network contact. Organisation of joint workshops and establishing working groups representing all the relevant stakeholders has enabled a high level of consultative process in all aspects of environmental policy and programme development. The tertiary education system has also been involved with the joint development and use of curricula and teaching materials on the environment. Relations with the donor and international NGO community was improved and formalised with the finalisation of the ESG and associated partnerships.

- The inspection service at the central and local levels has been enabled to play a more proactive, professional and effective role and a strategic plan has also been prepared for this purpose. Additional legal instruments have been proposed to support environmental inspections and a handbook was developed to guide the inspectors in their functions. Knowledge and competence has been enhanced through targeted training spread over 3 years and crucial equipment supplied to improve performance and effectiveness.
- Human resources have been developed through a variety of means, including in-country and overseas training, study tours, participation in workshops and conferences, executing special assignments jointly with international and local experts, providing access to latest information and technology etc., covering various aspects of environmental protection and management. This has equipped the staff to develop and implement policies and strategies and to perform other key mandated functions with greater confidence and effectiveness. Some the HRD and awareness generation activities covered not only the staff but also decision makers, representatives of counterpart organisations, environmental associations and community groups etc., thus eliciting their support and participation in the environmental protection effort.

Therefore, the project has been able to institute a capacity within MoSTE, NEA and DoSTEs to develop and implement policies and strategies and to perform other key functions within their mandate in the context of the National Plan for Environment and Sustainable Development and the Law on Environment Protection. Consequently, a strengthened capacity is evident within the Government of Vietnam to consider environmental implications in responding to anticipated future increases in development investment.

Lessons Learned & Recommendations

A number of important lessons and recommendations can be drawn from the implementation of the SEMA project. Recommendations specific to individual objectives and sub-objectives have already been highlighted in the result analysis section. The generic programme level recommendations are as follows:

- SEMA was the first nationally executed project on environment, whose implementation responsibility was assigned to a relatively young agency. Capacity building on national execution should have preceded project implementation, or at least included as a project activity. Initial delays and setbacks were eventually resolved as all partners concerned gained experience through implementation. Therefore, having now gained sufficient experience any future co-operation agreement with NEA should continue to be nationally executed.
- The observed lack of integration of the project within NEA is closely linked to the above issue. Perhaps due to past experience with donor executed projects, the officials were conditioned to view SEMA also in the same light. Having had no

inputs on the modalities of national execution it was left to "learning-through-implementation" to resolve this problem, which ultimately took time to realise and institutionalise.

- Staff capacity was, at times, stretched in implementing project activities. There is need for a better assessment of the absorptive capacity of the staff while planning project activities, both at the Centre and in the provinces. In other words, needs should be better co-related to practical feasibility. As far as possible inputs under different donor funded projects should be mutually exclusive and be not targeted at the same units or individuals. Alternatively, implementation of certain activities should be contingent upon commitments to increase staff numbers.
- The process of project development, particularly identification of activities and outputs should have been more participatory and consultative. This would have ensured a greater degree of ownership of and identity with the project activities by the beneficiaries. The facility, that was adopted subsequently, to make small but crucial in-course corrections to accommodate specific needs and emerging priorities however, greatly helped in overcoming this limitation.
- Some elements of the co-operative arrangement need to be improved, as the tripartite MoU between NEA, IUCN and SEPA is complex. While clear roles and responsibilities have been defined for each partner, the requirement for SEPA to work through the IUCN and for IUCN to provide back-up to the SEPA advisors (as further specified in the IUCN's terms of reference for consulting services) has not worked in actual practice. A direct bilateral agreement between NEA and SEPA would be a preferable and more practical alternative.
- As a result of the complex partnership arrangement and because of SEPA's remote location, monitoring of financial utilisation by SEPA has not been trouble free. Besides, delays in invoicing for expenses by SEPA has meant that costs are charged in the subsequent year making it difficult to properly monitor the pace and level of utilisation of funds.
- Staffing of key positions within the project's management structure should be stable to avoid dislocations and setbacks. During the project period, the only position that remained stable was that of the National Project Director. The CTA was replaced once, the IUCN - Country Representative once, the NEA Project Co-ordinator twice, and the SEPA Project Manager four times. While such changes are inevitable, they should be as minimal as possible.
- At the same time, the GOV should ensure that crucial decisions affecting the environment sector are taken as soon as possible. For example, the NSEP and NEAP need to be approved and integrated with national and sector master plans. Similar integration must take place at the provincial levels as well. Central and provincial governments need to act on recommended institutional changes for the environmental authorities.

- Considering the increased level of donor interest in environmental projects there is need to ensure effective, efficient and transparent collaboration with the donor community, for which the ESG and its associated partnerships must be institutionalised and made fully functional.
- While the relations between NEA and its partners have greatly improved, thus paving the way for a more holistic and collaborative approach to dealing with environmental challenges, the co-operation with MARD on nature conservation needs to be further improved. For NEA to fulfil its mandated key responsibility in implementing the Biodiversity Action Plan it would have to work much more closely and effectively with the other agencies and institutions concerned with this subject.
- The utilisation of long-term advisors for more technical, policy and institutional matters, as happened in the last 2 years of the project would have enhanced their cost effectiveness. This is again related to the issue of experience with national execution and the situation improved gradually as more and more management and administration functions were taken over by the NEA. The selection of international advisors and experts with previous experience of Vietnam or other developing countries would be a distinct advantage for any future co-operation.
- In terms of the model for HRD, while traditional activities like training, study tours, seminars and workshops should continue, consideration should also be given to identifying and implementing joint activities by the beneficiaries and the consulting experts/institutions, either international or local. Some successful examples of such joint activities were the development of the Handbook on Environmental Inspection, development of the NSEP and NEAP etc.
- There is a clear need for continuing the support to NEA for capacity building. The project has successfully laid the basic foundations and there is now need for more specific and targeted inputs in accordance with the priorities established in the national strategy and action plan. By doing so, it could be ensured that the project results are optimised, followed up and sustained. This support need not be contingent upon the expected upgraded institutional structure, as NEA even in its present shape and size will continue to need strengthening of its capacity in various fields.

Hanoi, 20 March, 2001

Dr. Truong Manh Tien
SEMA National Project Director

ANNEXES

- I Financial Situation**
- II Training in Vietnam**
- III Training Abroad**
- IV Study Tours**
- V Procurement**
- VI Local Consultancies**
- VII International Experts**
- VIII Publications**