



Vietnam Agricultural Science Institute
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**Analysis of agricultural environmental
institutions in the north of Vietnam
(Hai Duong province, Ha Tay province,
and Son La province)**

Summary

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INTRODUCTION

Land and water resources are overused in North Vietnam, largely as a result of rapid industrialization, population and urban growth. Widespread environmental degradation has taken place leading to poor health and living conditions and decreased income from farming and craft production.

At present environmental concerns receive only marginal consideration and adverse impacts are obvious on land, waters, and atmospheric resources. The causal factors include weak policies and legislation, low awareness and capacity of local and central authorities, and limited community participation in policy and decision-making.

To address the situation the Vietnam Agricultural Science Institute (VASI) trained and fielded teams in late 2003 and early 2004 to carry out five Participatory Rural Appraisals (PRAs) in three northern provinces of Vietnam: Hai Duong, Ha Tay, and Son La. The teams consulted with communities on common environmental problems related to upland and lowland agriculture and agro-industrial craft in representative localities. They jointly examined the capacity of the communities to propose, accept and apply new policies and solutions.

As a necessary adjunct to these studies, a VASI team undertook an analysis of agricultural environmental institutions in North Vietnam with a view to providing information about government institutions responsible for improving the rural environment.

METHODS

The purpose of the research was to:

1. Identify major institutions involved in environment policy and management at province, district, commune and village/hamlet levels;
2. Assess the organization, activities, technologies, financial resources, and environmental awareness of these institutions;
3. Describe the strengths and weaknesses of the institutions and make proposals for improvement.

Research zones were chosen to represent the following different agro-ecological zones:

1. Peri-urban zone – Ha Tay Province;
2. Rural Red River delta – Hai Duong Province;

3. Rural northern highlands – Son La Province.

Relevant information was collected through questionnaires, interviews, and analysis of documents and organizations and activities. The following are examples of the agencies interviewed:

1. Provincial Department of Natural Resources and Environment (DNRE) and the Departments of Agriculture and Rural Development, Centres for Clean Water, Women's Associations, Farmers' Associations, and Environmental Protection Associations;
2. District Chambers of Agriculture and Rural Development, Veterinary Stations, Medical Stations, and Forest Management Stations;
3. Commune Research Zones.

RESEARCH RESULTS

National Institutions

The **Department of Natural Resources and Environment** (DNRE) is authorized through laws and decrees to oversee the overall management of natural resources in the country, including environmental protection, issuance of permits and monitoring, and enforcement. Research and education are additional obligations.

New responsibilities for DRNE include overseeing the management of soil and mineral resources, environmental penalties, and in providing leadership in natural resource and environmental management in districts and communes.

The staff at DRNE number between 50 and 80 and most are not well trained in environmental issues. In Hai Duong Province about half of the staff has university training. In general the funding of DNRE is too limited to enable it to respond to the wide and varied range of tasks demanded, especially those related to the environment.

As part of its environmental management and inspection function, the DNRE carries out certain important tasks:

1. Helping institutions at all levels to develop guides for the implementation of the law on the environment and to plan and program its work over the short and long term;
2. Managing environmental protection projects in agriculture and rural development, industry and information technology, and the social sciences;
3. Reporting annually on the environmental situation in the provinces;

4. Organizing the training of personnel and raising public and media awareness on environmental protection.

Short courses are offered to staff on relevant topics in an effort to enhance their level of knowledge on environmental matters. In addition, a few staff members working on international projects have studied abroad. At present, the department sends staff to the University of Natural Science for classes during 10 days of each month for four years.

Annual reporting on the environment includes water and ambient air analysis, priority problems in environmental protection and their solutions. Monitoring activities were begun at some stations in the provinces in 2000, with a view to keeping records in the period 2002-2007. Resources to be monitored included river and lake water, rain water, ground water, ambient air in urban areas and areas around heavy ground transportation activities. Soils are not yet monitored.

The DNRE conducts environmental impact assessments for new investment projects and it is acknowledged that this work is in its initial stages. Another important activity is inspection of the implementation of the regulations on environmental protection which is in need of strengthening by further staff training.

The DNRE Centre of Resources and Environment Information provides services in preparing land maps, planning resettlement areas and transfers of land to forest use, and in storing and selling information.

The capacity of the DRNE to carry out its mandated work is hampered by lack of funds to meet its mandatory responsibilities. The same applies to the water, air, and land analysis activities. The department is understaffed and the staff is not adequately trained. Apparently the training courses need to be improved.

The **Department of Agriculture and Rural Development (DARD)** has responsibility for environmental protection measures on farms, grazing areas, and forest land, and for groundwater and hydroelectric works. One task of importance is the management of farm chemicals.

At DARD there is a Centre of Fresh Water and Environment responsible for providing running water and preserving the rural environment. This role assists international aid agencies who sponsor clean water projects in the provinces. As well, the Centre works to raise awareness on water quality and environmental protection. The present operations of the Centre include:

1. Building systems to provide running water;
2. Building deep wells and rain water tanks with funding from the province and the commune. This work is very slow due to a lack of labor and capital. On average there are 7 – 8 works built each year for 2 – 4 communes;
3. Building rural sanitary works to handle animal waste and to equip biogas tanks;

4. Working with the provincial press, Radio of the Voice of Vietnam and the Provincial Broadcasting and Television Station to produce articles, brochures and programs on environment and water. This cooperation also occurs on training days on preserving the environment, building sanitary works and clean animal breeding facilities;
5. Water quality analysis in laboratories;
6. Collaboration with UNICEF on a network for clean water. Funding for the clean water program comes from the national and provincial budgets, local sources, and from preferential credit.

Current problems with the Centre's activities stem from the householders' lack of knowledge and appreciation for a network of clean water and a clean environment. This is linked to low incomes and low standards of living in the agriculture sector. Poor regions who want clean water cannot afford to participate in the cost sharing programs to build facilities. Government funding is low and this puts the burden on the communes.

Another problem is the lack of harmonized legal documents on the functions, responsibilities, and rights of the centres, to ensure coordination among agencies in different regions. At present there are no centre staff at the district and commune levels. There is also unclear information on how to manage clean water production, and to fix the price for water.

Provincial Institutions

The **Provincial Plant Protection Department** monitors the harmful insect outbreak situation and trains local people in plans and networking for protection. It also checks the storage and use of plant protection chemicals and manages plant quarantine matters. Chemical suppliers are checked and warnings and fines are sometimes imposed. Illegal chemicals are confiscated.

Total staff in the unit in Hai Duong is presently 98 of which about half have university degrees. Pest management and control is the major activity of the department. There is no budget over and above staff salaries. The training offered to staff and farmers includes Integrated Pest Management (IPM) and about 930 participants have had this training. During the courses, they receive required advice on suitable chemicals for farming.

Provincial Extension Centres

These centres train farmers on agricultural technology and practices as well as on all matters of environmental protection. All information distribution tools are used and there is an emphasis on limited use of insecticides and on biogas development.

The training and technology transfer in biogas technology was initiated by sending extension workers to the Energy Institute to learn the technical side of biogas production. The trained workers then train one or two workers in the local commune until they can

build biogas units by themselves. In Hai Duong there are 13 worker groups who can build biogas units. The Hai Duong extension centre also sent two staff to attend biogas training courses in China and Philippines.

Every year the centres carry the biogas training program to a wider audience of users. However the program is hampered by funding shortfalls. For instance a 5–6 cubic meter unit costs 2.5 to 2.7 million Vietnam dollars (VND) and the extension department's budget is only 509 thousand VND, for up to 20–30 units per year. Therefore the investment rate is low and there is no provincial or district program to support farmers in solving environmental pollution problems.

The biogas initiative is also affected by the farmers' limited knowledge of its benefits and by weak technology transfer capacity at the provincial, district and village levels. A number of different designs are available and standards have not yet been recommended by government.

Provincial Health Centres manage the inspection of drinking water systems and approve projects to supply clean water. They also assist with guidance on manure management, household wells, bathrooms and toilets, and in waste water management. The centres also manage health-related controls on public places such as hotels, theatres, schools, shops, hospitals and cemeteries, and in local planning projects of city and rural developments. The staffing level of the centres in Hai Duong has recently dropped from 5–7 persons to only 2 doctors.

Other activities of the centres include collaboration with agencies involved in the World Environment Day, Clean Water and Environment Week, as well as involvement in environmental hygiene (clean food, water, household hygiene, waste facilities etc.) and occasionally checking plant chemical outlets, depending on the availability of staff.

Many other departments have roles related to the environment, including Planning, Construction, Industry, Transportation, Health Care, Trade and Tourism, Education and Training, Culture and Information, Judicial Department, Mass Media, Finance, Provincial Police, Provincial Army.

Informal Groups and regulations contribute to environmental protection and tend to focus on useful propaganda on human health and environment. Provincial Women's Unions are active in the three provinces with 18-28 staff of whom roughly a half have a BSc degree. Funding is from various sources. The activities include promotion and involvement in good garbage collection and in road maintenance.

The Provincial Farmers' Union promotes good planning on all matters of farm production including seeking out problem areas and solving them. Training in IPM and in biogas is also organized by the unions. The general impact of these activities is still low and their influences on the economy and environment are not clear.

The Bio-Environmental Association was formed in Hai Duong in 1997 with 300 members and an interest in disseminating environmental knowledge. Local projects are undertaken with funding from members.

Assessment of Provincial Institutions

The Resource and Environment Department is both a consultant and project manager in environmental matters. At the provincial level there is no focal point for all environmental issues. Responsibilities are shared among the Natural Resources and Environment Department, Agriculture, the Rural Development Department, and the Health Care Department. There is a lack of effective coordination in the activities of provincial organizations. The Centres are understaffed and under-funded and as a result programs are not fully implemented. The activities of informal institutions are not entirely effective with their emphasis on information dissemination and environmental promotion. The public is so engaged in day-to-day work that the efforts of the informal groups are not effective.

District Institutions

Each district has an office which manages environmental matters as well as planning, finance, commerce, and science and technology. Staff numbers range from 5 to 10 with one member with university training being responsible for the environment. Staff receive additional training on the legal interpretation of laws and regulations. The annual budget ranges from 10 – 25 million VND and covers the topics listed above.

Activities of the district office are carried out by public volunteers, with no budget. These activities include food safety checks and medicines for farm animals and farmers' families, and construction of kilns for farm products. The Health Protection office works on environmental protection, sanitary facilities for workers, and hygienic food protection. Water quality checks are carried out and the management of animal waste and garbage is another function. A team captain and one or two vice-captains lead groups in this work.

Apparently the environment role of this unit is not seen as important, because its main activities relate to checking for diseases among the farmers and their families and workers.

Non-official institutions such as the local women's association, the local farmers' association and the local youth unions are present in each suburban district. They have little effect on environmental matters.

Few district level institutions have environmental management responsibilities, because they lack funds and human resources. Cooperation between different levels of government is weak. For instance the Department of Natural Resources and Environment implements many projects with communes without notifying or referring to the relevant institutions at the district level.

Institutions at the commune level

At present there is no team at the commune level to carry out this work. The projects are carried out under the direction of the national, provincial, and district offices. The commune chairman presides over these projects and delegates tasks to the commune medical station or to the commune cadres. Examples of commune level projects are the campaigns for “The Week of Clean Water and Pure Environment” and the World Environment Day of June 5. The peoples’ committees of the communes cooperate with other groups to encourage garbage collection, the sweeping of village roads, and the cleaning out of ditches. Garbage collection is funded by an annual contribution from each family. In more developed communes there are projects to build wells, and to improve lavatories and animal breeding facilities. Such projects are sponsored by the Provincial Centres for Running Water and Rural Environment. In communes where animal breeding is carried out, the farmers may receive support to equip biogas tanks, from the Provincial Centre of Agricultural Expansion. At present the number of sponsored biogas tanks is low.

The Provincial Centres of Agricultural Expansion also develop IPM programs in several communes to improve plant protection.

In general environmental activities at commune level are far too small and scattered, and receive little interest by the local administrations.

Commune medical stations attend to medical needs for people living nearby. Clean water inspections are carried out twice a year by observation only, as there is no equipment for testing. If the rain water tank contains over 3 cubic meters of water, the water is recognized as clean (this is a provincial standard).

Commune environmental regulations are not obeyed as there are no sanctions, no rules of supervision, and no office responsible for environmental management. Some communes have rules on tethering buffaloes, the location of pit latrines and manure pits, placing building on roads, and the management of sewage trenches and disposal of insecticide bottles and packages in the fields.

In general all commune work in the area is financed by volunteers and there are no funds allocated. Regulations are not published and local people are not consulted in setting rules. With little supervision and no set rules or penalties the results are very weak.

The medical stations help to increase awareness through clean water inspections and treatment of people suffering from air pollution. Yet these activities are not effective as people lack belief in the quality of medical agencies and they lack funds to pay for services.

Institutions at the village level

There are not many regulations set at the village level. One village (Ben) has approved regulations but these have not yet come into effect.

At the village level the following activities are regularly carried out with funding from each household:

1. Village clean-up including roads and ditches. Cleaning of roads is done by the youth union of the commune.
2. Avoiding the improper use of roads, such as raising chickens on the road and using vehicles that damage the roads.

Other public organizations

These groups include women's, youth and farmers' associations as well as forest management units, all of which make positive contributions to environmental resource management. Clean water and environment day programs are supported without any fee. When a dispute arises, the village leader or a group of respected persons will help to mediate a solution, without penalty.

In general the peoples' committee of the commune is the most important entity and it decides every aspect including the village's environment. However its effect is minimal as no rules are circulated.

The next most effective entity is the village leader who manages environmental activities. The youth unions carry out work to clean up and enhance the environment. The medical stations raise awareness but the women's unions seem to have no effect.

In general the environmental regulations at the village level apply to ditch dredging, cesspit location, brick-making, and spring cleaning. These help to reduce air pollution and soil erosion. However they are not effective because there is no penalty for infractions. If local people are involved in making the rules, if there is support from other organizations, and particularly if human health can be improved, then the awareness of the people can be raised.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Organization

- Environmental management is not well organized, particularly at the district, commune and village levels. There is no independent section responsible for the environment. In fact there are many independent systems of management which are responsible for the rural environment.
- The role of the DNRE is weak.

2. Operations

- There are no environmental management tasks delegated from the provincial level.
- Functions and duties of the agencies overlap.
- The staff lack essential training.
- The functions of the agencies are numerous and many are not performed as mandated.
- The programs are under-funded although there is a focus on clean water projects.
- Positive awareness raising is a major activity in the study area.
- The rules and the penalties levied are not effective because they are not strict enough.
- There is a lack of clear objectives for agricultural production and environment.
- Supervision and inspection activities are lacking because of staff shortages.

Recommendations

1. Improve the system of vertical environmental management between national, provincial, district, commune, and village levels.
2. Clarify and coordinate the regulations between responsible agencies.
3. Improve the professional knowledge of the relevant agencies' staff.
4. Strengthen cooperation between agencies.
5. Attract non-governmental organizations to participate in environmental activities.
6. DNRE should delegate environmental activities to the provincial level and require the submission of progress reports.
7. At each level there should be targets set and reported upon.
8. Rules are needed to codify penalties including the allocation of responsibility for this activity to the relevant party.
9. Rules are required to bring actions against offending parties who pollute or otherwise negatively impact the environment.