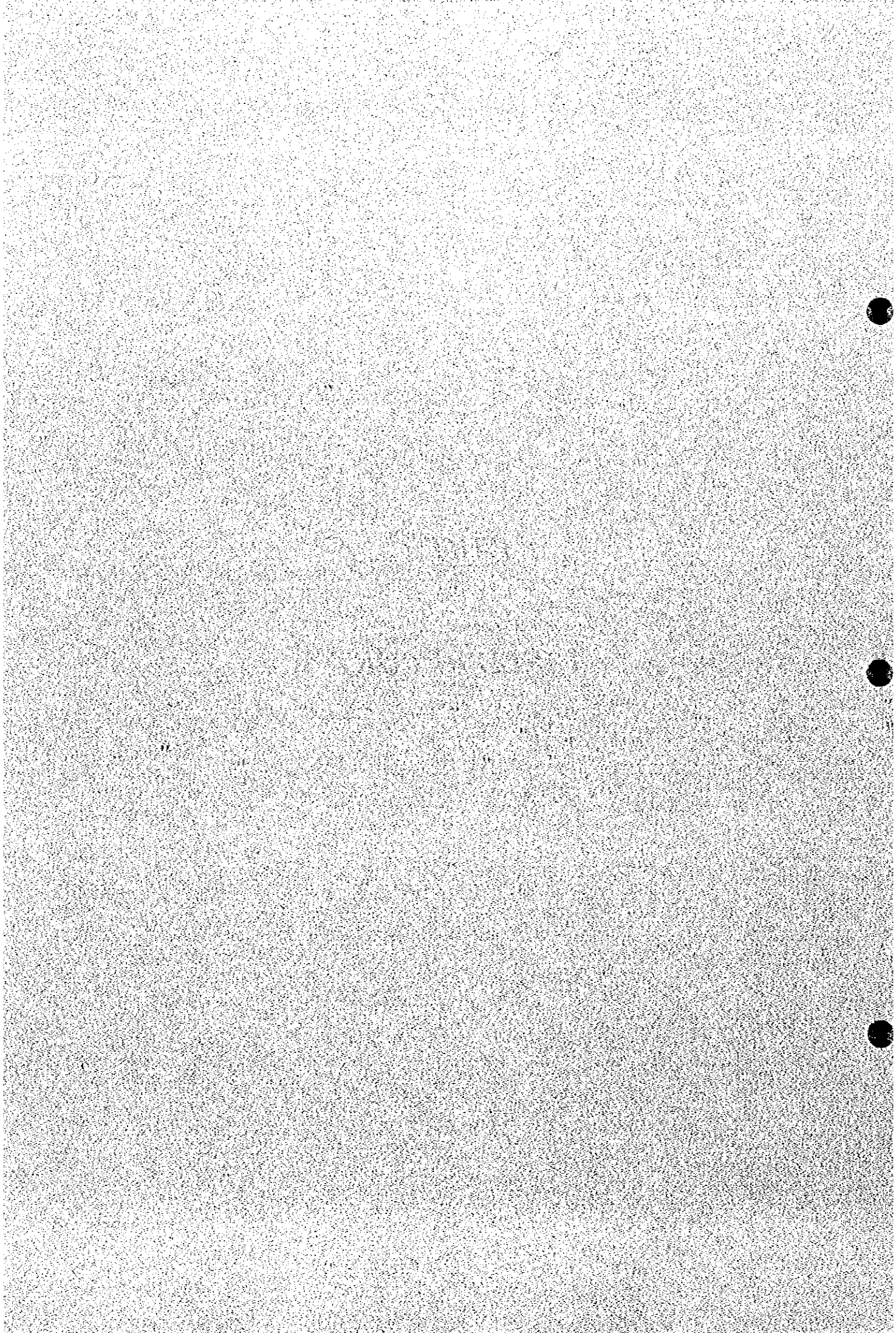


***PART 2***

***FIELD REPORT***



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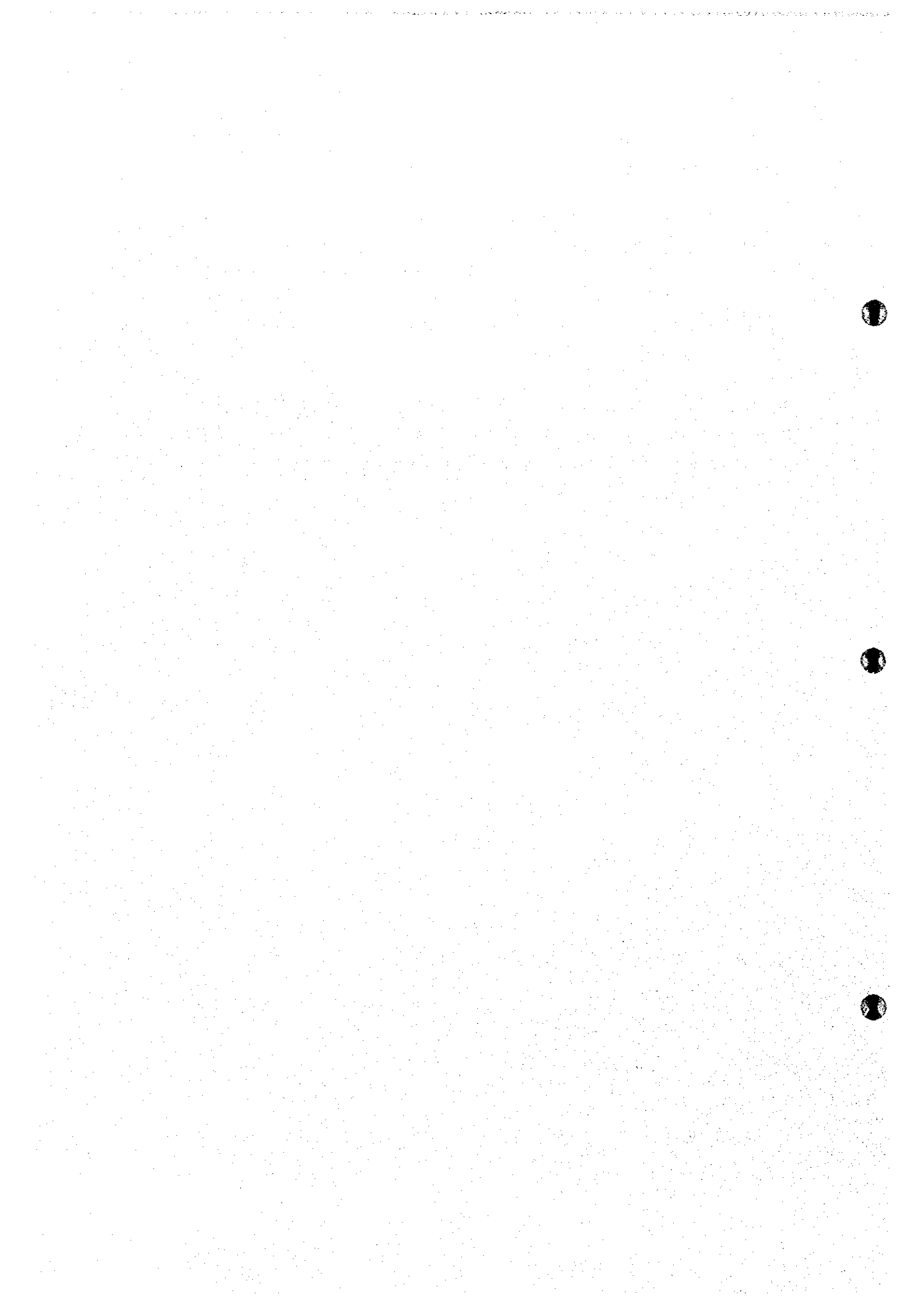
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## CHAPTER 1 Introduction

The aim of this document is to present the findings from a number of field visits undertaken to analyse the organisational needs of forthcoming commune water supply organisation in selected communes in Thai Nguen, Ha Noi, Ninh Binh, and Thanh Hoa and address related capacity building activities within a national institutional context. In the Supporting Report Volume A the analysis are presented.

The report has been prepared by Knut Terje Ellefsen, RAMBOLL as part of the *Study on Groundwater Development in the Rural Provinces of Northern Part in the Socialist Republic of Vietnam* conducted by Kokusai Kogyo as the lead consultant for JICA .



## CHAPTER 2 Field Reports on Organisation and Performance

### 2.1 Thai Nguyen Province

#### 2.1.1 Introduction

##### The Objectives of the Study Trip

A study trip to Thai Nguyen was conducted on the 23. and 24.9.98 to assess organisational and human resources issues of the main stakeholders involved in RWSS at province and district level e.g.:

- The Provincial Department of Agriculture and Rural Development including Provincial CERWASS;
- The District Offices of Agriculture and Rural Development
- The Provincial Department of Health
- The District Health Centres

The main objectives were to:

1. clarify their role in RWSS and the responsible section or office dealing directly with RWSS;
2. organisation, staffing and resources provided towards RWSS;
3. links and co-operation with other organisations;
4. on-going programmes, projects or activities within the project area;
5. programming, planning and evaluation procedures for RWSS activities;
6. main problems as viewed by the stakeholders.

Based on the findings a profile of the RWSS sector will be outlined - from the national level down to commune level. The profile will not, however, include details of the target communes as this is done in connection with the commune survey.

The profile will be used when addressing the involvement of the different stakeholders in each phase of the projects cycle (planning, implementation, operation & maintenance (O&M), monitoring and evaluation) e.g. in order to sustain and further develop the RWSS facilities established through JICA assistance:

1. How are the O&M of RWSS facilities to be organised and conducted;
2. What roles are the different stakeholders to have to support O&M of RWSS facilities at commune/village level;
3. What kind of HRD support will be necessary to provide through the project at each level to sustain O&M of facilities.

Confronting the selected RWSS technology and its operational requirements with the

capabilities and capacities of the target communes as well as other support organisations, a HRD programme can be outlined addressing the skills, know-how and attitude as well as organisational issues necessary for sustainable O&M of RWSS facilities.

### **Description of the Province**

Thai Nguyen represents the North East Mountain Region of the Country. The province is located immediately north of Hanoi and was until January 1997 the southern part of the old Bac Thai Province. The province is divided into a southern lowland area, which includes the provincial capital Thai Nguyen City and a northern highland area.

The province has a population just over one million people, a moderate to high population density of 303 people/km<sup>2</sup>. The average household size is 4.5. The majority of the population is Kinh, while 25% of the population belongs to ethnic minority groups with Tay (10%) and Nung (5%) being the largest groups. The literacy rate is high - 90% also among the ethnic minority groups.

Agriculture is the main activity. Rice is the main crop. The province is also well-known for its tea production areas in the north. In 1996 the per capita GDP was VND 1.58 mill. Which is only 46% of the national average (VND 3.45 mill.). 11% of the households are considered to be poor (income less than VND 100.000/month).

### **Target Area**

The following districts and communes have been selected for the study.

<b>District</b>	<b>Commune</b>
Dong Hy	Dong Bam Hoa Thuong
Pho Yen	Nam Tien
Thai Nguyen Town	Thin Duc

Due to time constraints meetings with district representatives were conducted in Thai Nguyen Town. However, to get some hands-on impression a field visit was conducted to Dong Hy district. Meetings with provincial authorities were held at CERWSS and other provincial departments.

### **Stakeholders Met**

The stakeholders were informed about the survey a week in advance. A fixed questioner to prepare the delegates for the meeting accompanied this. An introductory meeting was held at CERWSS followed by interviews of the district representatives. Appointments were made for provincial representatives the following day as well as a visit to Dong Hy district.

During the district visit, meetings were held with the:

- Vice Chairman of the District Peoples Committee;



- The Chief of District Agriculture and Rural Development Office
- The Director of District Health Centre;
- Dong Bam Commune Health Centre;
- Dong Bam Agriculture Co-operative (Commune)

At province level meetings were held with:

- Provincial Department of Agriculture and Rural Development;
- CERWASS;
- Provincial Department of Health

### 2.1.2 General Background Information

#### Water Supply Facilities in Dong Hy District

<p>Van Lang commune: Time of construction 1993 Construction cost VND 130 mill. Capital resources: MARD and UNICEF Coverage 40 households.</p>
<p>Hoa Binh commune: Time of construction 1997 Construction cost VND 420 mill. Capital resources: MARD and UNICEF plus peoples contribution Coverage 50% of households.</p>
<p>Schools in the province: Type of system: Dug wells with hand pump or electric pump. Capital resources: IT Organisation</p>

### WATSAN Programmes

#### Water Supply

The WATSAN project seems to have been limited in this province. Between 1993 and 1996 the following systems were constructed:

Facility	Number of Users
189 drilled wells	850
152 dug wells	680
1541 new VN6 hand-pumps	7000
11 gravity water piped systems	15000

### **Sanitation**

This was provided by a revolving fund initiated by UNICEF to promote slab latrines in one district during 1993 and 1994. The programme was not successful and it is estimated that about 250 latrines were build in the 2 years and that few repayments were made. Apparently the slab latrines was not popular because of its high cost (VND 1 mill.) and people wanted to return to DVC and SV latrines.

DOC through PDOH are responsible for sanitation, although CERWASS and DOSTE both feel that their mandate also cover this area to a certain extent. There is virtually no spending on sanitation, other than the WATSAN programme (UNICEF).

### **Information, Education and Communication**

Mainly the Women's Union, Youth Union and the health sector are involved in IEC. Information on water and sanitation is integrated part of mother and child-care promoted through the health centres (DOH). This is however limited and the main focus is on family planning.

The UNICEF booklet "Fact for Life" is used by Women's Union. It has been translated into both Kinh and Thai/Nung languages. Some information is also provided through the mass media by the MOC.

A network of village health volunteers has been established in the province, but they are not much involved in RWSS activities.

### **2.1.3 Provincial Level**

#### **Provincial RWSS Management Board**

The main actors within the RWSS sector are CERWASS, Department of Health through the Provincial and District Medical Centres and Commune Health Centres. Women's Union is also involved to a great extent, especially within activities related to IEC campaigns and credit systems.

Overall co-ordination is done by the Provincial Steering Committee for RWSS (presently called a Management Board of Safe Water and Environmental Sanitation). Members are from the different unions, Planning and Financial Department. The members of the board includes: DARD, Department of Science, Technology and Environment, Department of Health, Department of Planning and Investment, Department of Construction, Department of Finance. DARD is the Vice-chairman (Chairman is the Chairman of the People's Committee). CERWASS acts as secretary. The board was established in 1996. Generally the Board meets quarterly or upon request/needs. This is an important body as the Chairman is the Chairman of the People's Committee is a heading the Board. CERWASS is participating as an observer. The main function of the board is to co-ordinate joint effort development within the RWSS

sector. The board meets every quarter to review progress and challenges addressed on previous board meetings. Proposed actions on how to meet targets and challenges for the remaining planning period as well as addressing immediate actions to solve severe problems.

### **Provincial DARD**

#### **Organisation and Staffing**

DARD was established in 1996 through the integration of Department of Agriculture, Department of Hydrology, and Department of Forestry. Total number of employees is 2,500. DARD is divided into 11 units, which include among others:

1. State management which is divided into 4 branches;
2. Administrative section which includes CERWASS, a centre for agriculture development and forestry;
3. Business section
4. Production section deals with consultancy, surveying, forestry planning and overall managerial responsibility for a number of construction companies.
5. Hydrological monitoring

The DARD administrative itself contains of 10 sections with a total 68 staff headed by a Director and two Vice-directors.

#### **Functions and Activities**

Within DARD the Hydrological Section is responsible for monitoring the RWSS sector and the work of CERWASS. 4 specialists are engaged in this. CERWASS is the executing agency.

The main function of the DARD head quarter (HQ) is to provide the different units with working schedules and programmes to be performed. Monitor works of the units plus provide financial planning. HQ is also nominating staff and co-ordinates with other sectors including the Provincial Finance and Planning Department.

The function of DARD is to manage regulations based on:

- Environmental sanitation regulations;
- Natural water resources law;
- Hydrological facilities law;
- Dike protection law;
- Guidelines from MARD

The main responsibilities and duties of DARD includes:

- Make recommendations to the Provincial People's Committee (PPC) on policies and decisions within the sector;
- Make recommendations to the PPC on strategies, long-, medium-, and short term plans for the sector. Develop strategies and master plans as well as provide guidance and co-ordination with other sector on implementation;

- Provide professional guidance on all productive issues within the sector;
- Make research and apply new sciences and technology to improve performance of the sector;
- Monitor performance of the sector including quality, safety, and environmental issues related to agriculture production and flood and water resources management;
- Secure the functions of state management of the state companies in the sector;
- Perform state inspection and professional investigation as required including providing and managing licences;
- Provide veterinary services and safety of foodstuff production and use;
- Conduct all internal co-ordination within the sector;
- Build capacities and human resources within each sub-sector;
- Conduct flood protection and prevention of drought;
- Guide the allocation of human resources and the development of new economic areas/zones;
- Manage all state properties and human resources under the control of DARD.

### **Water Supply**

Water supply is divided into two main sub-sectors:

- water for agriculture production
- water for domestic use

CERWASS is responsible agency for water management for domestic use.

The main issues of DARD are agriculture production and water supply to domestic consumption and production. DARD's (and CERWASS) involvement in environmental sanitation is very limited. The Provincial Department of Health who is responsible deals this with for all health issues related to water supply and sanitation. Department of Science, Technology & Environment is responsible for the impact on the environment from sanitation and sets standards for pollution as well as gives discharge permissions. The Provincial Department of Health and Department of Science, Technology & Environment gives guidelines to CERWASS on RWSS project issues.

On-going programme under DARD:

1. Water supply for mountainous areas;
2. Protect water in Chaò River;
3. Rural water & sanitation: water treatment; processing of water; is done in co-ordination with Health Centres.

CERWASS is responsible agency for water management for domestic use.

This is done through:

1. Plan and implement piped rural water supply as well as provide bore-holes/wells for villages;
2. Training of local users to O&M
3. Provide guidance;
4. Enforce regulations

### **Planning and Reporting**

Planning and co-ordination of RWSS activities are based on national targets and priorities as well as local needs. This is evaluated and compared to the capacities and resources available at province and lower levels of administration. Annual plans are then made and adjusted according to the long- and medium plans of the RWSS sector. Information on local needs are provided from the Commune People's Committees which dispatch the plans and requests to the PPC through the priorities of the District PC. RWSS plans are then investigated and evaluated by CERWASS and other provincial institutions before projects are approved and forwarded to national level ministries for final approval. The plans are then reversed back to the province for final budget allocation and implementation by the responsible agency(ies).

Presently there is no master plan for water resources development in the province the Authority does not map (ground water resources for Water and Hydrology Facilities). Plans for RWSS is therefore based on 2-year prospective planning and annual plans guided by the National Objective Programme and UNICEF programme. Before implementation of water supply projects the Authority provides license for Water and Hydrology Facilities.

The budget for RWSS is very limited, most financial resources comes from UNICEF and users with some additional funding from the provincial budget and national level. Capital sources are in general:

- MARD;
- UNICEF (on materials);
- Provincial budget;
- Peoples contribution

### **Application for RWSS facilities**

If a commune want to have water supply it has to follow the following procedures:

1. Commune and district Agriculture Office send a letter to DARD and explain present situation and requested the time of implementation;
2. DARD and Department of Planning and Finance submit recommendations to the Provincial People's Committee;
3. After approval a pre-feasibility study followed by a feasibility study is conducted by: consultants in survey company; hydrological exploitation company and by CERWASS (only in small scale projects);
4. The study report is submitted to the Provincial Committee through DARD and eventually approved.

5. After approval the Provincial People's Committee will select the contractor to implement the project.

The District Agriculture Office is not involved in project preparations only in implementation.

Procedures for project implementation: Funds are granted two ways 1) by Provincial DARD or by District Agriculture Office (People's Committee).

Responsible for project implementation is DARD's Functional Section.

1. A Project Management Board is established. Which prepare contracts; make appointment of design company;
2. Transfer funds for design;
3. Initiate site clearance and construction;
4. Monitor contract responsibilities;
5. Makes final report to People's Committee

Community involvement is restricted to provision of labour and financial contribution.

The commune is to O&M the facilities while major repairs are to be done by a company or CERWASS.

#### **Meeting with Provincial CERWASS**

##### **Mandate**

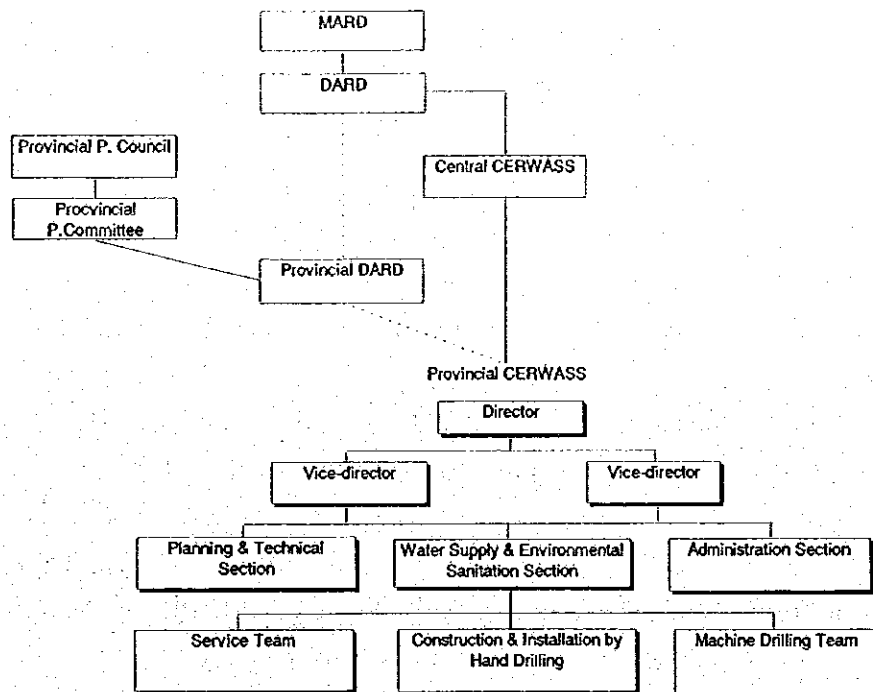
The centre was established in September 1991 when it was mandate to work with UNIFEC and other international organisations in RWSS.

CERWASS has three main responsibilities:

1. To facilitate rural water supply facilities;
2. Provide equipment and expertise to local communities on water supply;
3. To repair RWS facilities;
4. Guide the commune on O&M

##### **Organisation and Staffing**

The organisational structure is outlined overleaf.



One Director supported by two Vice-directors heads Thai NGUYEN CERWASS. Totally there are 47 people employed. Staffing pattern is outlined below.

### Staffing Pattern

Positions and Sections	Education	Number
Director	Engineer	1
Vice-director	Engineer (BSc)	2
Planning & Technical Section:	Engineer	4
Water Supply & Envirm. Sanitation Section	Engineer	1
Service Team	Skilled labours	10
Construction & Installation Team (hand-drilling)	Skilled labours	10
Machine Drilling Team	Skilled labours	10
Administrative Section	College degree	4
Support Staff		5
<b>Total</b>		<b>47</b>

The 8 senior staff (university graduates) has been employed since 1991 when the centre was established. The remaining 3 were employed in 1998.

Employment conditions are divided in to categories:

- **Labour contracts:** This type of contract can be divided into 6 months, 1 year and 5 years. After end of period there is no security of keeping the job.
- **State official:** To become a state official one has to pass a state examination upon one gets permanent employment within the government service system.

According to CERWASS labourers are trained to improve their skills regularly but no examples were given in which way. Professionals (engineers) are offered training in connection with (UNICEF) projects. Other forms of training can also be offered, but not on a structured HRD basis.

Monthly salary for professionals is VND 400,000 plus allowances. Salaries for senior professionals can be higher than this and a more flexible scale is used.

### **Function and Activities**

Overall planning is based on the National Development Plan 2010. At present TN province has a feasibility project on overall planning for RWSS to the year 2010, and 76 projects on landscape protection and exploitation in Can River Basin. This includes:

Annual plans are based on guidance from

1. DARD and the Provincial People's Committee;
2. Central CERWASS directives;
3. MARD directives

The planning process includes:

- Overall planning projects approved by Provincial People's Committee;
- Projects on landscape protection in Can River Basin and 6 provinces in the area approved by Central Government.

Investment capital comes from state budget; international organisations; mobilisation of people.

Planning includes

- a feasibility study and involvement of the target commune
- preparation of project documents by Provincial CERWASS which send the documents to Central CERWASS for assessment and approval

The District DARD provides information collected from the communes on present water quality and quantity. The District Agriculture Office together with the Commune People's Committee co-ordinates with CERWASS to implement RWSS projects including information and mobilisation/education campaigns. CERWASS inform about the project and the Commune PC uses local media and commune meetings. Presently, budget allocations only meets 15 -20 % of planned RWSS needs.

The main problem regarding RWSS project is the lack of awareness of people, lack of skills to implement projects and lack of commitment by the upper level organisations.

Mobilisation of communes is done through IEC (propaganda) campaigns through



involvement of local unions like Women's Union, Farmer Union etc. This is organised by the Provincial CERWASS in co-ordination with the District Agriculture Office, Commune's People Committee in the project area plus the local unions. The objective of the IEC is to get people committed, increase their awareness on RWSS issues and to contribute financially and manually to the construction and O&M of RWSS facilities. Limited funds are provided to training of RWSS facilitators.

O&M of facilities is to be done by the people themselves through guidance by CERWASS which also will assist in repairing the facilities if this can not be done by the communities themselves.

Financing O&M is through local contribution. For piped water supply this is generally done through water fees consumption (using water meters). Funds for large repair is collected case to case basis. Only in poor areas, where there is difficult to mobilise financial resources will provincial CERWASS use its own budget to repair facilities. In some cases also cover O&M (10% of implemented projects).

Spare parts and equipment used in RWSS facilities are generally Vietnamese standards and easy to purchase on the local market. CERWASS has also spare parts on stock. The main problem is to have the financial means to purchase them.

### **Reporting**

The provincial CERWASS send a cover letter supporting a report-outline to the districts. Based on this outline, the districts will collect the data through the Commune's People Committee and send it back to provincial CERWASS.

CERWASS is suppose to monitor and evaluate implemented RWSS systems, but there is a lack of funds to do this. CEWRWASS shall report to the Provincial People's Committee and DARD as well as to central CERWASS.

### **Co-operation and Interaction with Other Stakeholders**

When a project is implemented it needs to be coordinated between CERWASS, District People's Committee, Commune People's Committee and social unions in the project area (to discuss and select the construction place, type of facility, and capital mobilisation).

### **Meeting with Department of Health (DOH)**

The Vice-director of the DOC opened the meeting. Other participants were Chief of Protection Section, Chief of Planning Department; Deputy Director of Medicine Hospital Programme for Water and Foodstuff

Department of Health takes care of preventive and curative health services through the operation of the primary health care system at local level. DOH reports to the Ministry of Health (MOH) at national level and PPC at province level.

Its position, responsibilities and functions in the RWSS sector are governed by the Law on Public Health (1989). In the water and sanitation sector the role of DOH is to provide health education, to promote proper water supply and sanitation practises, and to implement sanitation programmes in the rural areas.

In the RWSS sector the law assigns mainly regulatory functions and information and education campaigns (IEC) to DOH. However, it also allocates responsibilities to DOH for prevention of communicable diseases, which also includes RWSS.

DOH is the umbrella organisation covering all health activities at provincial and local level.

The main functions of the DOH regarding RWSS are to:

- Provide standards and guidance to the public on all health issues related to safe water and environmental sanitation;
- Give standards and guidance to professional organisation engaged in building and operating water supply systems;
- Monitor and evaluate health issues related to public use of water supply facilities and sanitation.

The most important institution related to RWSS is the Provincial Disease Prevention and Sanitation Centre (PDPSC) which has professional medical staff (medical doctors and nurses).

## PDPSC

The PDPSC reports to the provincial Department of Health. Its key functions are regulatory related to the monitoring and enforcement of standards, although delivery of public services including IEC programmes are also included in its mandate. The main functions of the PDPSC is:

- Provision of primary health care services;
- Control and monitoring of environmental sanitation;
- Monitoring of industrial and occupational health;
- Health monitoring in schools;
- Inspection of sanitary facilities in public works;
- Provision of malnutrition prevention programmes;
- Epidemiological monitoring of 23 communicable diseases;
- Vaccination programmes;
- Health education;
- Control and monitoring of epidemic diseases.

As available funding determines the activities of PDPSC, the National Environmental Sanitation Programme of UNICEF for controlling and testing of latrines and water quality is a core activity.

The PDPSC has comparatively large staff with qualified doctors, nurses, technicians, and laboratories and support staff. The staff is headed by a director and organised in 5 main sections:

- Administration;
- Planning Section;
- Laboratory (provide testing of domestic water);
- Sanitary Faculty (provide training on health issues related to RWSS);
- Disease Prevention Faculty.

The PDPSC works through the Department of Health and the Commune Health Centres through delegation of responsibilities, issuing orders, monitoring performance according to set targets, and provide professional support including laboratory services.

The most important unit regarding RWSS is the **Sanitary Faculty** responsible for all aspects of public and environmental sanitation. The faculty has totally 15 professional medical staff and health workers responsible to the head of faculty. The faculty has four sections:

- Public Sanitation;
- Industrial Sanitation;
- Foodstuff Sanitation;
- Environmental Sanitation.

All sections are interacting and directs and support the District Health Centres (DCH) as well

as Commune Health Centres (CHC) on the different aspects of RWSS. This includes:

- Provide guidelines and guidance on how to handle water to be safe and the importance of using (clean) latrines;
- Provide guidelines and guidance on how to dig wells and operate and maintain them in a proper manner;
- Monitor and evaluate the RWSS situation.

### **Operations**

These functions are generally done the following way:

Upon request from the Department of Health - which in turn is requested by the Commune Health Centres (CHC) - staff from the DHC laboratory collects water samples and other samples to establish the causes of any water diseases. If the tested water is found condemned, the polluting source must be detected by the of the CHC with technical support from DHC or the PDPSC.

In principle water from wells should be tested regularly - especially after flooding. In general water from wells should be tested every 3 months. In connection with piped water systems testing of water quality should be performed twice a week. If there are problems with the water quality PDPSC send a request to CERWASS through DARD on the matter and demand for proper action to be taken (treating of water etc.)

Division of responsibilities and co-ordination of work between the province and the district is done on monthly meetings. Based on the reports PDPSC prepare actions to be taken at district level. Except for vaccinations most planning is done on a monthly basis. When there is an outbreak of diseases caused by condemned water, PDPSC will ask the responsible authority to take actions.

IEC is generally performed the following way:

- Campaigns through mass-media;
- Use of mobile amplifiers (loudspeaker on cars);
- Each hamlet has a person responsible for propaganda.

PDPSC instruct the DHC which then organise CHC to conduct the campaign. In general, campaigns are only conducted when there is an outbreak of disease. Most programmes on environmental sanitation are conducted with financial support from UNICEF. In those cases where there are no external finances provided, each level (province, district and commune) are responsible for financing their own part of any action (planned targets based on higher level projections) if it is not part of a national programme or campaign receiving targeted financial resources.

It seems that the only form of co-operation between CERWASS and PDPSC is through the process of testing domestic water. The Department of Health and PDPSC has to a very limited extent been involved in UNICEF's WATSAN programme. The main agent for this programme is CERWASS. At the same time very limited focus is put on environmental

sanitation in connection with rural water supply project organised through CERWASS. In those cases where a more programmed approach to environmental sanitation is applied it seems that DOH is conducting these independently from the operations of CERWASS. Often DOH promotes its own water supply project (provides information and guidance on construction of well and rainwater collections systems (water jars). Targets are generally set annually based on national prospective plans (80% of the households shall have access to safe water).

Government campaigns to improve latrine conditions have been conducted through a pilot programme which introduced clean latrine models in selected communes. The objective was that through experience, the commune people would copy the model and build one on their own. This programme has not been too successful. The reasons given were that the facilities were too costly if standard drawings and specifications were to be followed (between VND 1 - 2 mill.) people lost interest in the importance of sanitation and after some time. It is the impression of the consultant that limited resources were provided to the Commune Health Centre to follow-up on IEC activities as well as the construction of latrine facilities can be done much cheaper using only local materials and a simplified technology. Presently, no authority can enforce introduction of environmental sound latrines therefore IEC plays an important mechanism to facilitate the use of proper latrines.

Presently, PDPSCs are part of an educational network managed by the Ministry of Education (MOE) where PDPSCs provide guidance on health education. This is generally done by arranging training courses for teachers on different health issues. The budget is provided by MOE and PDPSCs are given a small allowance. In general, IEC budgets are very limited.

## 2.1.4 District Level

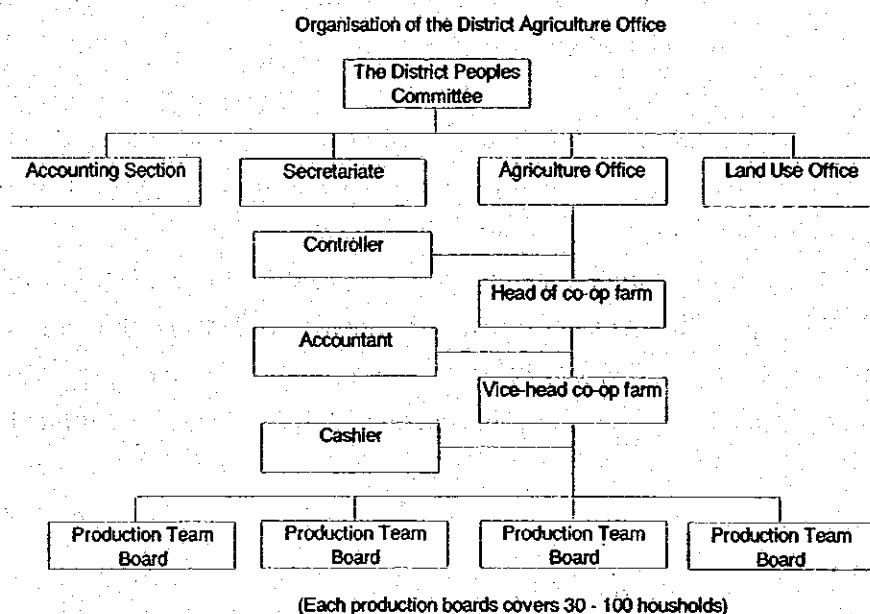
### Meeting with District Agriculture Office

#### Mandate

The main focus of the District Agriculture Office (DAO) is agriculture production and support/control of the agriculture co-operatives established in the communes. According to interview DAO should address all issues in rural areas including RWSS. However, it seems that rural water supply is very much left to Provincial CERWASS while environmental sanitation is left to the District/Commune Health Centres.

#### Organisation and Staffing

DAO staffing norms are regulated by MARD regulations but the province are able to nominate/set targets for each district.



In rural areas the Head of Co-operative Farms are in charge for the following within the boundaries of the co-op.:

- Rural economic and social programme;
- Cultivated zone;
- Agriculture Economic Development

Using Dong Hy District is used as an example the staffing of DAO is totally 23 of which 5 are allocated at the facilities of the District People's Committee. The remaining are Agriculture Extension Workers allocated to the Communes (Commune People's Committee). There is a need for 2 more staff, but there is no target (norms) for this need.

District head quarter (HQ) staffing includes the following staffing categories:

Staffing Category	Education
Chief of Office	Agriculture and forestry engineer
Assistant-chief	Agriculture and forestry engineer
Environmental sanitation and water drainage	Agriculture and forestry engineer
Forester	Agriculture and forestry engineer
"Technical matters" and accounting	College graduate

Agriculture Extension Workers counts 18 of which 16 are engineers (agriculture and forestry) and 2 are college graduates. The extension workers (sometimes) stays at commune level.

No courses are offered for DAO staff on regular basis, but when new technologies are introduced extension workers are informed about the use. This can be done at a general meeting at district level or through other information received from other extension workers.

#### **Functions and Activities**

DAO is to participate in water investigation (water quality) and quality of food-stoff (agriculture production). It seems to be very related to agriculture production.

When problems occur DAO send a message to Provincial DARD for instructions. Instructions are then given by the Provincial DARD on actions to be taken. If CERWASS activities are performed in the district DAO is to assist CERWASS and co-ordinate activities. It seems that CERWASS are in charge of the technical issues of RWSS while DAO is in charge of community mobilisation and the "soft" side of RWSS. DAO is also involved in the selection of commune/place for establishing facilities as well as direct the people to inform the communes/villages.

This will also include information to the communes on the use of safe water and environmental sanitation.

Extension worker's work-schedule is based on last year's tasks to be performance plus annual performance increase added. The DOA gives the targets. The work-schedule is forwarded to the DAO which compiles are the work-schedules and make corrections according to budget allocation from the Provincial DARD and the District Peoples Committee. The budget is then approved by the Provincial DARD and the District Peoples Committee.

When targets are set the Commune's Peoples Committee are involved in target setting and makes request to the Agriculture Extension Worker.

#### **Reporting**

(DAO) reports to the Provincial DARD and to the District Peoples Committee.

#### **Co-operation and Interaction with Other Stakeholders**

The main interaction/co-operation is done by assisting CERWASS on request.

#### **Main Problems**

Regulations are fixed/ridged but the communes are facing different problems, which can not be solved if the rules and regulations becomes more flexible for the Agriculture Extension Worker to act.

#### **Meeting with District Health Centres**

The District Health Centre (DHC) coordinates, directs and support all aspects of public health provision performed at commune level. More specific issues are handled by the Provincial Department of Health (PDOH) which in turn coordinates, directs and support the DHC in their duties and obligations.

A Board of Health Care was mentioned but it is not clear at this stage if it exists and its function.

#### **Organisation and Staffing**

The staffing and organisational set-up is guided by national norms provided by the Ministry of Health (MOH) and local conditions. In the following Don Hy is used as an example. Totally, 64 people are working under the DHC. A special section - Rural Health and Disease Section is committed to the RWSS. The section has 3 medical doctors and 8 nurses. Together they are responsible for: food-stuff protection; environmental sanitation; nutritious protection; and social diseases.

Each commune has a Health Centre (CHC) with 3 - 6 nurses under direction of Chief of Centre (also nurse). The mandate for the CHC is the same as for the DHC, but facilities and equipment is often very limited and no doctors are allocated at commune level. Only general health service is provided while more complicated cases are transferred to the DHC or PCH or district clinics/provincial hospital for medical treatment.

Average of 10 years of experience by medical doctors. Nurses 6-7 years of experience.

The allocation of staff is done according to standard norms depending on number of people in the area as well as geographical and logistical factors (provincial target). Limited budgets put a restriction on individual staff management. Professional staff is paid through the national budget. There is no local budget for staff training. If training is provided it is through MOH. MOH arrange training yearly programmes which professionals can attend on recommendations by their superiors.

Salaries follows government regulation:

- |                   |                   |
|-------------------|-------------------|
| • Director of DOH | VND 500.000/month |
| • Doctor          | VND 400.000/month |
| • Nurse           | VND               |
| 300.000/month     |                   |



### **Operations**

The Commune Health Centres conduct vaccination programme, inform school children about health issues including the importance of using safe water, latrine and hygienic behaviour. CHC also take water samples of wells after flooding and when there are reasons to expect sickness from water source. This is done on request from the public. Samples are sent to the PDOH via the DHC for testing.

Targets for vaccination and other health preventive measures are planned on a year to year basis by the PDOH for each DHC, which then details the targets for each CHC. Information and education campaigns (IEC) are limited due to lack of funds and there are no programmed activities on how to use safe water and conduct environmental sanitation (use latrines). If a well is found condemned after taking samples the Commune Health Worker instruct the commune/family to close the well and provide guidance on how to secure/dig new well as well as how to treat water to be safe. These are random activities more based on the individual health worker than a programmed activity. On important issues village meetings are called upon as well as meetings conducted by the Commune's Peoples Committee.

Also mentioned was a national programme with 18 activities to be implemented at local level. However, the budget allocation for implementation is very limited. It seems that Commune Health Workers get an allowance on top of their normal salary equal to VND 7 -10.000/day to be used for IEC but the amount is too small to implement national instructions.

A number of national projects or programmes at local level are organised and implemented through the local unions e.g. the Women's Union and the Youth Union.

### **Reporting**

The DCH are responsible to the District Peoples Committee on its execution of work, while relate to the PDOH on medical standards and national programmes described by MOH. The DCH also directs and guides the professional conducts of the Commune Health Centres (CHC). The CHC makes monthly report to DHC, which compiles all the reports, and send it to the PDOH.

### **Co-operation and Interaction with Other Stakeholders**

There are very limited co-operation or interaction with other departments and state organisations engaged in the RWSS sector. If any this is done by the Chairman of the District Peoples Committee who delegates/instruct on specific issues to be addressed. In most cases this is done in connection with larger cross-cutting campaigns.

### **Main Problems**

The main problems concerning RWSS are:

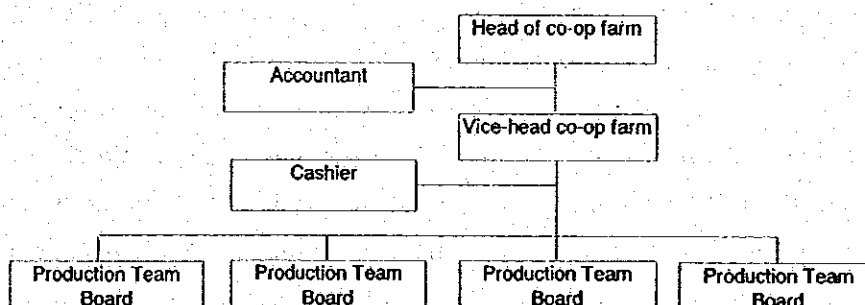
1. The economic conditions of the communities to get access to safe water plus lack of knowledge and proper behaviour regarding environmental sanitation.
2. Lack of resources at local level institutions to approach the problems in a programmed

manner.

### 2.1.5 Commune Level

#### Meeting with Agriculture Co-operative

The co-operative consists of 9 Production Boards each organising between 30 -100 farms. Totally there are 700 households covering 2200 people. An outline of the organisation is presented below.



The co-op farm is under the Commune People's Committee where the Agriculture Extension Worker is located together with other Commune People's Committee offices. Main focus is agriculture production, little attention towards RWSS.

#### Dong Bam Commune Health Centre

Meet the Assistant-chief. The centre was established in 1988. 4 staff members (Chief of Centre, Assistant-chief plus 2 staff) all nurses. The facilities was very basic and simple. Regarding RWSS: a list of household having well and latrines were kept at the centre. The list was used in connection with testing of wells and register good and bad wells.

The centre is mostly occupied by vaccination campaigns as well as by consultation to the commune people suffering from different diseases. Ann other occupancy is foodstuff protection. As the Chief of DOH was not at the office, all documents were lock up.

Several health campaigns have been conducted through the years at local level in which the DOH is having a central role. The targets for improved health conditions were established in the 1980s. The targets of the "clean campaign" compared to present level is presented below.

According to the targets for 1970-80 each family shall have:

Facility	Target Proclaimed 19970-80	Target Reached in1998
• clean latrine	80%	20%
• clean well	80%	50%
• clean bathroom	80%	-

Assessment of the clean campaign now being conducted. The campaign was designed by MOH and implemented by the Provincial and District DOH in selected pilot communes. The hope was that people will get inspiration after having seen pilots. 5-6 households were selected in pilot areas where 2 chamber latrines were constructed supported by IEC campaigns. The main problems was lack of sufficient funds to spread the project on a larger scale and continues IEC campaigns.

Another problem was the way IEC was conducted. In those areas where there were no pilot latrines to experience the campaign got to theoretical and people lost interest. There were also limited guidance to the District DOH and the Commune Health Workers. Only a letter was sent to the District to implement the campaign without any support in form of training of health personnel, information materials etc.

The work related to WS&S is done more or less separately from the Agriculture Office, which is the lowest administrative level of community development. Only in connection with large campaigns co-operation is established. Latest campaign was "World Environment Campaign" which was conducted 5. June under guidance of the Commune People's Committee.

## 2.2 Ha Noi Provincial Areas

### 2.2.1 Introduction

#### The Objectives of the Study Trip

A study trip to one of the selected target districts of Ha Noi was conducted on September 18 - 19 and October 13 1998 to assess organisational and human resources issues of the main stakeholders involved in RWSS at province and district level e.g.:

- Hanoi CERWASS;
  
- The District Offices of Agriculture and Rural Development
- The District Health Centre
- Commune RWSS Management Committee (if any)
- Commune People's Committee
- Commune Health Centre

The main objectives were to:

1. clarify their role in RWSS and the responsible section or office dealing directly with RWSS;
2. organisation, staffing and resources provided towards RWSS;
3. links and co-operation with other organisations;
4. on-going programmes, projects or activities within the project area;
5. programming, planning and evaluation procedures for RWSS activities;
6. main problems as viewed by the stakeholders.

Based on the findings a profile of the RWSS sector will be outlined - from the national level down to commune level. The profile will not, however, include details of the target communes as this is done in connection with the commune survey.

The profile will be used when addressing the involvement of the different stakeholders in each phase of the projects cycle (planning, implementation, operation & maintenance (O&M), monitoring and evaluation) e.g. in order to sustain and further develop the RWSS facilities established through JICA assistance:

1. How are the O&M of RWSS facilities to be organised and conducted;
2. What roles are the different stakeholders to have to support O&M of RWSS facilities at commune/village level;
3. What kind of HRD support will be necessary to provide through the project at each level to sustain O&M of facilities.

Confronting the selected RWSS technology and its operational requirements with the capabilities and capacities of the target communes as well as other support organisations, a

HRD programme can be outlined addressing the skills, know-how and attitude as well as organisational issues necessary for sustainable O&M of RWSS facilities.

### Description of Hanoi Rural Area

Ha Noi has an area of 922.8 km<sup>2</sup>, the longest distance from the north to the south is 50 km and the widest is about 30 km. Most of the area of Ha Noi is located in the Red River Delta.

Ha Noi is the Vietnam's second largest city after Ho Chi Minh City. People living in urban areas accounts for 60% of the total population which close to 2.4 million. Population density in the urban areas is 23,000 persons/km<sup>2</sup> and 2,500 persons/km<sup>2</sup> in the rural areas.

Ha Noi is divided into 10 urban and suburban districts.

#### Urban Areas:

Districts	Wards
Ba Dinh	12
Hoan Kiem	18
Ha Ba Trung	25
Dong Da	26
Tay Ho	8

#### Suburban Areas:

District	District Towns	Communes
Soc Son	1	25
Dong Anh	1	23
Gia Lam	4	31
Tu Liem	5	18
Thanh Tri	1	15

The urbanisation of Ha Noi is growing fast and it has become the main location of leading sectoral scientific institutions covering 200 scientific institutes, 600 national research and experimental centres, 24 universities and colleges with over 800 staff train annually about 10,000 cadres.

#### Target Area

The following districts and communes have been selected for the study.

District	Commune
Tu Liem	Xuan Dinh
	Dong Ngac

Meetings with district representatives were conducted at the CERWASS office. Field visit

was conducted to Xuan Dinh commune as well as to the district institutions outlined above. In addition field visits were conducted in September to Tu Liem District (Thay Thu Commune) and Thain Tri District (Thin Liet Commune) to assess present RWSS system.

#### **Stakeholders Met**

At province level meetings were held with:

- CERWASS;
- Provincial Department of Health;
- Women's Union

### **2.2.2 Hanoi Municipal Level**

#### **DARD**

Several meetings have been conducted with DARD in the other target provinces and sufficient information has been collected for the consultant to construct a comprehensive picture of the overall functions of DARD. The main actors within the RWSS sector as seen from DARD are CERWASS and the Authority of Water & Hydrology Facility Management responsible for licensing and permitting use of water resources. Out of these two CERWASS is the most important organisation dealing with the day-to-day issues of rural water supply. Sanitation received little attention and is left to the health authorities.

A general outline of DARD is presented below.

#### **Organisation**

DARD is divided into Section, Centres, Authorities, Groups/Teams, State Business Companies with different kinds of responsibilities. Sections are responsible for sector planning and general management. Centres are project-implementing organisations. Authorities are state management organisations. Groups/Teams are scientific institutions giving advice to the different sector under DARD. Business companies are commercial enterprises involved in production of goods and services.

DARD has eight sections: Administration, Staff & Labour Arrangement, Planning, Plants and Animal Feeding, Basic Construction, Social Issues, Agriculture & Forestry Product Processing. In addition there is also an Inspection Board.

Centres: CERWASS Centre for Agriculture and Forestry Production, Centre for Agriculture & Rural Development Science.

Authorities: Water & Hydrology Facility Management, Flood and Storm Protection & Dam Management, Domestic Animals, Plant Protection & Forestry Development.

Groups/Teams: Overall Hydrological Planning, Overall Agriculture Planning, Forestry Investigation & Overall Planning.

State Business Companies including agriculture companies, hydrology companies and forestry companies.

The most important organisations involved in RWSS are:

- Water & Hydrology Facility Management Authority, which is responsible for managing ground and surface-water resources. This includes giving license to exploit water resources. The authority is also overall responsible for approving projects dealing with water resource exploitation, monitoring and control.
- The Labour Arrangement Section is involved in terms of its overall control of CERWASS staff.
- Planning Section is responsible for compiling all plans within the sector including CERWASS projects.
- Social Section makes policies on water tariffs/financial support to poor households/communes.

DARD's (and CERWASS) involvement in environmental sanitation is very limited. This is dealt with by the Provincial Department of Health who is responsible for all health issues related to water supply and sanitation. Department of Science, Technology & Environment is responsible for the impact on the environment from sanitation and sets standards for pollution as well as gives discharge permissions.

### **CERWASS**

CERWASS was established in 1986 by Decision No. 3412/QD-UB with the aim of working with UNIFEC and other international organisations in RWSS. In its initial phase CERWASS was only responsible for water supply but since 1995 when it was transferred from Minister of Labour, Invalids and Social Affairs (MOLISA) to MARD it has (in principle) also been responsible for environmental sanitation.

CERWASS is regulated by:

- Circular 200/TTJ issued by the Prime Minister on rural water supply for domestic consumption.
- Decision No. 63/1998/QD-TTg from 18/3-98 on approval of municipal water supply to 2002.
- 5/1998/QD-TTg from 14/1-98 on the Objectives of the National Programme.
- Regulation 54/QD-4B from 6/1-98 by Hanoi People's Committee on temporarily management and exploitation of ground water

The main objectives of the centre are to:

1. Evaluate present water supply systems;
2. Assist the province in planning (short, medium and long-term) water supply;
3. Organise and implement projects;
4. Share domestic finances to execute work;
5. Implement water supply projects supported by UNICEF;
6. Authorised to make proposals supported by domestic organisations and international donor

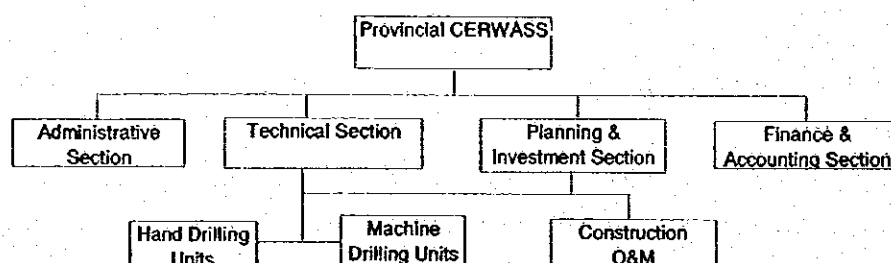
agencies;

7. Carry out campaigns on environmental management and protection - train staff to do this;
8. Construct pilot projects on RWSS

All communication goes through DARD, which instructs CERWASS on selection and implementation of RWSS project.

### Organisation, Staffing and Functions

The present organisation of Ninh Binh CERWASS is outlined below.



A Director who has held his position since 1986 heads the centre. The Director is a BA in economy. One Assistant Director and a Technical Vice-director support him. The Assistant Director is a BA in economy and held his position since 1994. The Technical Vice-director received his position in 1996 and is a hydrologist and holds a BA in economy. Together they constitute the Management Board. Each section has 1 section head with one assistant.

Total staff is 55 of which 15 have university degrees (BSc or BA). The staffing pattern is outlined below.

Category	Mgt. Board	Adm.	Technical	Planning	Accounting	Hand & Machine Drilling
Univ. grad	3	1	6	3	2	
Technicians					1	
Workers		2		1		6 teams á 6 staff
<b>Total = 55</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>36</b>

The majority of staff have been employed since 1986 and have gained comprehensive technical experience in planning and implementing rural water supply systems. Experience from environmental sanitation however, is very limited as no focus is given to this subject by CERWASS.



Employment is based on government regulations on state employees (staffing targets and professional qualifications). Average salary is VND 400.000 for professional staff and VND 300.000 for workers per months.

The funding of salaries comes from 2 sources:

- Senior and managerial staff plus administrative staff are paid through the national government payment system. 15 receive their salaries this way.
- Contract staff (drilling-workers and casual workers) are paid through CERWASS own sources of funding e.g. drilling assignments and consultancies conducted through local contracts. The operational budget of CERWASS is therefore partly depending on income generating activities achieved through local contracts.

Staff training/courses have been conducted for drilling staff. However, funds for HRD is very limited and there are no plans available stating needs and priorities. Most training provided is through courses and seminar offered by international agencies (UNICEF).

The main functions of Hanoi CERWASS are related to planning and implementation water supply projects. The majority of the projects are funded by combined funds from UNICEF, MARD, and local contribution. The Planning Section does the planning on a year to year basis. In 1994 a 5-year medium plan was prepared for the 1995 - 2000 period but the central authorities have never approved it as this will make commitments on budget allocation. The national authorities (MARD and MOF) plan capital investments only on a year to year basis and to a great extent rely implementation on co-funding from UNICEF and other international organisations. It is therefore not possible for either central or local CERWASS to apply a planning horizon longer than a year ahead. However, some preparatory work is done to facilitate possible project on a longer term (generally 2 years ahead<sup>1</sup>). In principle the planning made by CERWASS should include:

- A Master Plan stating needs and available water resources (ground and surface);
- Overall infrastructure development plan (20 -30 years) based spatial planning data (socio-economic projections and land use);
- Long-term development/investment plan (10 - 15 years);
- Medium-term development/investment plan (5 - 10 years);
- Short-term/annual development/investment plan;
- Project designs and budgets.

This planning cycle is not applied as explained above. On a year to year basis local CERWASS investigate a number of possible projects (pre-feasibility studies) while the final selection is done at Central CERWASS following MARD priorities and selection criteria. Implementation of water supply projects therefore related to funds available from central level and political priorities.

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<sup>1</sup> Presently by the National Objective Programme for 1998-2005.

For the 1998 5 piped water supply systems were applied for by Hanoi CERWASS. 1 was approved while additional funds were provided for 50 drilled wells with hand-pumps (with co-financing from users and UNICEF)<sup>2</sup>.

Among the 16 communes located in the district:

- 5 have piped water systems (of which 2 are implemented without CERWASS involvement);
- 2 are connected to the Greater Hanoi water supply system (1 more is in the process of being connected);
- 2 are being presently assessed by this study; the remaining is using drilled wells with hand-pumps.

Comparing the number of applications made annually by Hanoi CERWASS and the actual number implemented the workload of Hanoi CERWASS must be regarded as moderate e.g. that sufficient capacity exist to support the proposed JICA RWSS projects.

#### **CERWASS Operations**

The main operations of CERWASS are related to water supply project partly financed by UNICEF with contributions from the users and national/municipal level. The role of CERWASS within this context is to:

1. Survey, plan and make design of water supply facilities
2. Facilitate the construction of facilities through other organisations or companies or do the construction themselves.
3. Apply facility management and maintenance support

CERWASS involvement in environmental is very limited the main priority is facilitation of water supply facilities in at commune level as well as develop facilities in new residential areas. In doing so CERWASS has to co-operate with other organisations according to government regulations and formal procedures. There is no formal co-ordinating RWSS body (RWSS Management Committee) responsible for overall co-ordination of RWSS activities.

Present long-term planning is restricted to two year intervals which guides the fulfilment of annual (target) plans. However, the work load and involvement of CERWASS finally depends on the how a water supply (WS) project is financed. There are limited national resources available as well as the local level authorities are financially squeezed.

In principle CERWASS has the authority to design and construct WS facilities. However, if a district is able to finance a project from own sources, they are free to select other expertise than CERWASS. If the financial sources includes national funding or funding from UNICEF CERWASS will be involved in the different steps of the project cycle. CERWASS can also be

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<sup>2</sup> Total budget for was VND 460 mill. Of which VND 200 mill. From state budget, VND 180 mill. from users (and Hanoi Municipal People's Committee) VND 60 mill. from UNICEF.

hired as a consultant if the recipient gets their funds from other sources than national budget or UNICEF.

In case of Hanoi out of 15 CERWASS designed and constructed 5 and restored 6 the remaining was done by other agencies/companies. It is stipulated that only 50% of the water supply projects applied for and made preliminary studies are implemented. No sanitation projects are implemented by CERWASS at this stage.

It appears that the involvement of target communes in the whole project cycle is very limited. Planning is very much top-down. Local participation is generally restricted to financial contribution and provision of manual labour on the request from the Commune People's Committee. After completion of construction, local operators are training in basic O&M skills. CERWASS staff or other organisations with expertise and license do repairs. The costs are covered through the collections of water fees.

Monitoring of water quality is done by the District Health Centres through the Disease Prevention Team, which takes water samples if there is a suspicion of bad water quality. Other tests are done randomly. The communication between health authorities and CERWASS is generally limited to the detection of water-borne diseases in the drinking water.

### **2.2.3 District Level**

A combined meeting was conducted with representatives from the District Peoples Committee (the Rural Economy and Development Office and District Health Centre). The meeting was chaired by the Vice -chairman of the District People's Council.

The main topics of the meeting were related to planning and involvement in RWSS as well as organisational support to commune level. From the outcome of the meeting it appears that all aspects of water supply is handled by Hanoi CERWASS either through central CERWASS budget allocated and approvals or on direct request and payments by local authorities or private persons.

No RWSS Management Board has been established although this was found at commune level. No reason was given to why it was not established at district level.

The organisation of the District Peoples Committee is done in the same manner as described in the other field reports and will not be repeated here.

The three main organisations directly involved are the Rural Economy and Development Office and District Health Centre and Women's Union. Women's Union was not available at the time of the field study.

#### **The Rural Economy and Development Office**

12 staff are employed at REDO of which 3 were directly involved in working with the development of (new) residential areas. One was responsible for water supply facilities. He

has a background as an electric engineering with additional training in water supply technologies. Since no planning exceeding the perspective of one year ahead, the main work done related to water supply are overall guidance of CERWASS. Activities in the district as well as monitoring existing operations of water supply facilities, which included provision of accounting guidelines for operators, is done in co-ordination with CERWASS. In reality, very limited work is conducted by the REDO as all expertise on rural water supply lies with CERWASS.

Generally, all requests on support on water supply goes formally through REDO, which forwards a letter to DARD and CERWASS. REDO has also the right to request private drilling companies with a licence to make wells upon approval from REDO and the Hanoi Authority for Water Resources Management which is represented at district level by the Office of District Authority for Water Resources Management<sup>3</sup>.

No sanitation component is applied in connection with CERWASS involvement. This is left to the responsibility of the District Health Centres and the Commune Health Centres.

### **District Health Centre**

The DHC reports to the Hanoi Municipal Department of Health on all professional matters but is also responsible to the Hanoi People's Committee on implementing specific district health policies.

A Board of Directors consisting of a Director and two Vice-directors heads the DHC. Totally there are 140 staff of which 80 are allocated to the district hospital. 60 professionals are allocated to the remaining sections of which the Disease Prevention & Sanitation Team cater for 1 doctor who is team Leader and 6 nurses.

The main functions of the team are:

- Manage vaccination campaigns;
- Introduce preventive action towards infection diseases;
- Facilitate awareness on environmental sanitation and promote construction of "clean latrines, clean wells, and clean bathrooms.
- Promote proper handling and storage of foodstuff.

The organisation of DHC is outlined overleaf.

The role of the Disease Prevention & Sanitation Team is to make guidance and training to CHC staff, provide information material, monitor and ensure that instructions are

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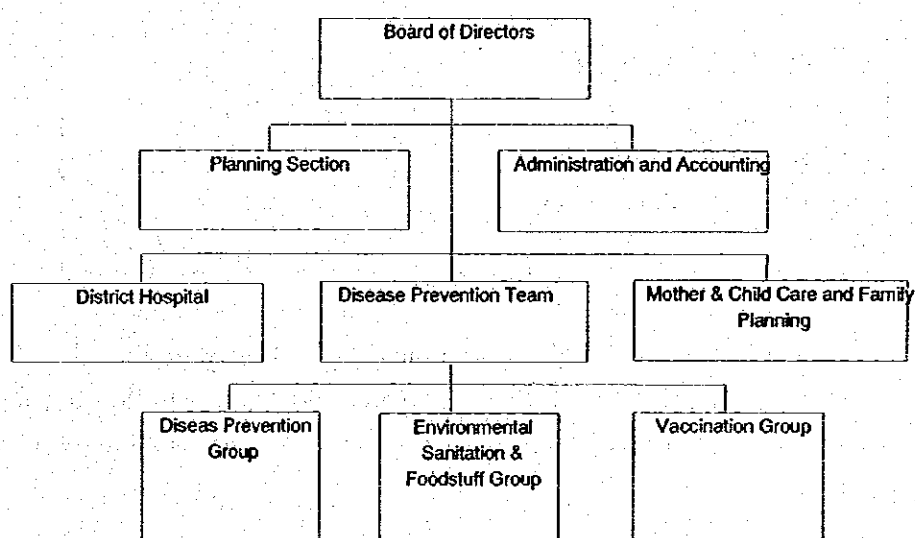
<sup>3</sup> The co-operation between Office of District Authority for Water Resources Management (ODAWRM) and REDO is restricted to provision of collected data. REDO collect data on the need for water resources for agriculture production which is provided to ODAWRM which then make projections on water needs and calculates water costs for each co-operative (water is treated as an economic good).

implemented. Some of these functions include among other things:

- Provide instructions on national campaigns like the “international environmental day”;
- Provide guidance on how to make proper latrines (technical design are provided to the communes via the CHC);
- Guidance on how to make and secure clean wells;
- Distribute IEC materials received from the province and direct any IEC campaigns instructed from the provincial level;
- Collect, assess and approve monthly reports on RWSS from the CHC;
- Compile data and produce statistics on RWSS issues;
- Conduct investigations on RWSS issues at commune level as required;

The organisation of DHC is presented overleaf.

### Organisation of DHC



It appears that the DHC also plays a very limited role in managing RWSS. On water main focus is on collections and testing water samples from piped systems collected either by REDO or Commune Health Centres and give advise to REDO or/and CERWASS on actions to take. CERWASS then instruct the operator(s) of the water supply unit on how to apply the necessary actions. Other responsibilities of DHC are to monitor water demand and facilitate provision of safe drinking water. This is reported to the District People’s Committee, which reports to Hanoi People’s Committee and to CERWASS for further actions. Government target standards are used as yardsticks (70liter/person/day for water supply according to national standards).

According to the DHC 90% of the households in the district have hygienic latrines; 50% have access to safe water while only 5% have tapped water.